An Address

ON THE

DEVELOPMENT OF MODERN METHODS OF WOUND TREATMENT.

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GENTLEMEN,—On thinking over the subject which was suggested as one likely to prove interesting to you—namely, the subject of wound treatment—it occurred to me that an attempt to trace the various steps in the development of the modern systems, more especially of the Listerian method, and to point out the present position of matters, would not be devoid of interest. It is remarkable how many people have misunderstood the meaning of the changes which have occurred during the last few years in the methods of treating wounds, and have failed to see that these methods were good only in so far as they acted on the principles first laid down by Sir Joseph Lister, and that the changes made by Lister himself were merely developments in the practical application of those principles carried out in unison with the progress of discoveries and observations, more especially in connexion with bacteriological science. I have often heard it remarked that Lister had no fixed principles, that he was always changing his methods so that it was impossible to follow him, and that now he has reverted to what had been termed by some "simple cleanliness." It is true that Lister has been constantly changing his methods, but these changes have always been in the direction of the better application of scientific facts as they became known—facts which, all of them, supported the principles which had from the first been the basis of the Listerian treatment; there has never been any backsliding, so to speak, from the original principles. The aim from the very first has been to do nothing more than is absolutely necessary to carry out the scientific requirements, to interfere with the natural healing processes to as small an extent as possible, and to simplify the methods as far as is consistent with safety. The term "simple cleanliness" which is so often used is utterly unscientific and unmeaning, and not only unmeaning, but misleading. To most minds it merely conveys the idea of the removal of gross particles of dirt from the hands, instruments, skin, &c., and the avoidance of unwashed and dirty applications to the wound; but this is not at all what is done by those who follow the teachings of experience in the treatment of wounds or of bacteriological science. They define the kind of dirt which must be got rid of; and what they advocate is not at all what would be popularly understood by cleanliness, but what is really strict asepsis—that is to say, the destruction of living micro-organisms and the avoidance of their introduction into wounds. To use the word "cleanliness" as synonymous with "asepsis" is, therefore, to introduce and invite error, and to employ an utterly unscientific designation, and that without any advantage whatever; indeed, its use indicates to my mind either want of observation or inability to draw logical deductions from the facts observed. A substance may be dirty in the ordinary acceptation of the term, and yet be quite suitable for aseptic work, whereas, on the contrary, a substance may be apparently to the naked eye thoroughly clean, and yet be impregnated with the most infective virus. This term cleanliness should, therefore, I maintain, be entirely given up in speaking of the treatment of wounds, and those who write on the subject should state exactly what they mean—whether they mean asepsis or sepsis; it must be one or the other.

I shall not trouble you with the history of the methods of treating wounds before Lister commenced his work. Up to that time the views which had been enunciated were of the most contradictory, and, as we now can see, often of the most absurd character. In the early ages it was thought that the proper treatment of a wound was to employ substances to make it heal, and to encourage the growth of new flesh, and it took many centuries of observation and work to convince surgeons that what is required is not the application of materials to *make* a wound heal, but to remove the causes which *prevent* the wound from healing. Even in the seventh century Paul D'Egineta pointed out that nature was the most important factor in the healing of wounds, and that attempts to force healing were erroneous and hurtful. Since that time a few writers advocated similar views, and directed their attention to the study of the causes which prevented wounds from healing, and which led to the various diseases that so often followed operations. Before very long chief attention was directed to the air, some asserting that the air itself was poisonous to wounds, and must be excluded by the employment of numerous dressings; others that it was the temperature of the air; and others, again, such as Magatus, stating that it was not the air so much as miasms which were contained in the air. From time to time also surgeons, such as Colbatch, Heister, and others, advocated methods of dressing which approached more or less in action to antiseptic dressings, and which, according to the statements of these surgeons, yielded remarkable results. Strange to say, however, these methods never spread beyond the practice of the individual surgeon. I need not follow up the history of wound treatment in former days; I went very fully into that some years ago in a book which I published on Antiseptic Surgery, and I will pass on to consider the state of matters as regards wound treatment at the time when Lister began his antiseptic work. At that time there was considerable diversity of opinion, and much confusion and obscurity in the theoretical views which were held, but the majority of surgeons still looked on the air, and probably most of them on the oxygen, as the chief hurtful agent, some, however, regarding the temperature of the air as the point of greatest importance. One surgeon, indeed—namely, Lemaire—attributed the untoward results of wounds to fungi, yeast, and other vegetable organisms present in the air. Further, a certain proportion of surgeons held that bad results were associated with, if not dependent on, the decomposition of the fluids in the wound; but they looked on this decomposition as the result of the action of the gases of the air, and often as an unavoidable alteration in the effused fluids. At that time—namely, in the early sixties—a number of methods of treatment were in vogue, and each was advocated as the best by those who used them. Perhaps the one most commonly employed was the simple *water dressing*, where the wound was covered with a strip of lint dipped in water, outside which was placed a larger piece of impermeable material, such as guttapercha tissue. Again, there was the *open method* of treatment, in which no dressing whatever was applied to the wound, the parts being left freely exposed to the air. Then we had attempts to promote healing by *scabbing*, carried out either by the use of various powders, or by placing a piece of dry lint over the wound, or by Bouisson's method of so-called ventilation of wounds, in which air was blown on to the surface from time to time by means of a caoutchouc bag so as to cause evaporation. Further, we had the opposite extreme in the method of *occlusion* introduced by J. Guerin, where elaborate arrangements were employed to prevent the access of the gases of the air to the wound by the use of valves, the production of a vacuum, and so forth. Again, we had the method of treatment termed *incubation*, where the temperature of the air around the wound was kept up, this method being founded on the observation that wounds often did remarkably well in warm climates, a result attributed to the temperature of the air rather than to racial differences. Of much more importance were the methods of treatment by irrigation and the water bath, where, on the one hand, a constant gentle stream of fluid was permitted to flow over the wound, or, on the other, the part concerned was immersed in a bath of tepid water, which was frequently changed. And then we had the whole field of subcutaneous surgery, which was founded on the principle of excluding air from wounds, and large numbers of operations were performed with very great advantage in this way. And lastly, just before Lister began to work on the subject, we had statements by Lemaire and one or two others as to the advantage of coal tar in the form of powder or paste, and, later, of carbolic acid.

It is thus evident that at this period the methods of wound treatment were of the most diverse character, and no one of them was so strikingly superior to the others as to lead to its universal adoption. It is true that subcutaneous surgery from its much greater safety had become widely used, but its field was of course comparatively limited; and of the other

methods those which probably yielded the best results were irrigation and the water bath. While the results obtained by the various general methods varied a good deal, according to the plan employed and the degree of asepticity obtained, yet none of them freed the patient from the risks incidental to wounds, and I may in a few words indicate the kind of results which were obtained, and the rules of practice which were based on the experience of these methods. In the first place, in major operations such as amputations, a large mortality occurred, and was expected to occur, from septic diseases, varying from 25 per cent. to 40 per cent. or more. Then, again, operations on bones, such as excisions or operations for ununited fracture, were looked on with the greatest dread, as involving a very great probability of septic poisoning, and, as a matter of fact, the only operations on bones which were carried out with any degree of frequency or confidence were those in which it was possible to employ the subcutaneous method. Compound fractures were looked on as injuries of extreme fatality, and the rules which were laid down in the older books, and which, curiously enough, still exist in some of the more modern works, show that the mortality after these accidents was so great that in the majority of cases it was deemed best to amputate. Operations involving healthy joints, such as operations for fracture into joints where the fractured fragments had become displaced, operations for the removal of loose bodies from joints, and so on, were unthought of, or, if attempted, were done with the very greatest hesitation, and resulted in many cases in the death of the patient. Such a procedure as opening a healthy joint for the purpose of diagnosis or inspection would have been condemned as absolutely unjustifiable. Similarly, with regard to operations involving the peritoneal and other serous cavities—such operations as are now done on the intestines, the kidneys, the ovary, and so forth—were many of them quite unthought of even thirty years ago; in fact, operations of expediency and convenience such as are constantly performed at the present day were regarded as in most cases unjustifiable, and operative surgery was more or less limited to cases in which surgical interference was imperative, and where it was thought worth while for the patient to undergo a considerable risk.

It is interesting in this respect to compare the changes in practice which have followed the introduction of anæsthesia on the one hand and of asepsis on the other. Up to the time when anæsthetics were introduced the chief aim of the surgeon was to acquire great dexterity and rapidity in his manipulations, and with rare exceptions only those operations were undertaken which could be rapidly performed. But even after the introduction of anæsthetics, when it became unnecessary to take the sensations of the patient into account, the area of surgery was comparatively little extended on account of the great risks which followed the more extensive operations, and operative procedures consisted in the main of amputations, removal of malignant tumours, occasional excision of joints, &c.; the performance of more complicated operations, and operations involving bones, joints, veins, serous cavities, &c., were for the most part condemned, and when carried out only too often led to the death of the patient. The introduction of anæsthetics had thus no appreciable effect on the rules of surgical practice; but what a marvellous difference there is at the present time as the result of the introduction of aseptic work. In the great majority of cases our surgical rules have been altered, and numerous operations are now performed as a matter of routine which, according to the experience with former methods of treatment, were looked on as quite unjustifiable, and many of which were quite unthought of. In compound fractures, for example, the rule now is only to amputate if the limb must die or be quite useless functionally, whereas in former times a compound fracture was regarded, even when small, as a very serious injury, and in many cases amputation was performed under otherwise favourable circumstances, merely on account of the great risks which were apt to follow septic changes in the wound. The idea of cutting down on a simple fracture in order to obtain a better position or more accurate union would have been scouted in former times, and yet it is now a question, to be considered in the case of many fractures where it is impossible to reduce them or to keep them in place, whether it is not better to cut down and bring the bones properly together. This is more especially the case with fractures which extend into joints, where it is difficult to bring the fragments into accurate apposition and to avoid the locking of the joint subsequently as the result of the altered position of the ends of the bones. For example, in cases of fracture about the elbow-joint I think it is often advisable to cut down in the recent stage and pin the bones together. In the case of fracture of the patella, it is now the rule at the hospital with which I am connected in all cases to open up the part and unite the fragments in such a way as to obtain bony union, and we have never had reason to regret such a procedure; on the contrary, the patients recover perfect use of their limbs in a way which could not otherwise be obtained. Similarly, in the case of dislocation, whether of recent occurrence or of old standing, where reduction cannot be effected by manipulation, it is one's duty for the future usefulness of the part to operate with the view of replacing the dislocation. Or, again, in such an injury as fracture of the neck of the humerus with dislocation, where formerly the treatment was to obtain union of the fracture in the first instance, and then subsequently to try to reduce the dislocation—an attempt most usually followed by failure—the proper treatment now is to cut down at once and replace the head of the bone, which can be quite readily done immediately after the injury, and then to treat the fracture according to the ordinary rules. In fact, we have, as the result of the introduction of antiseptic work, the whole region of bone and joint surgery opened up in a way which was formerly not dreamed of. We have the operation of arthrectomy at a comparatively early period of tuberculous joint disease, one of the most valuable of our surgical procedures; we have free incisions into joints with the view of removing foreign bodies, or even of ascertaining what is wrong with the joint; we have all the operations for deformities of the bones, ununited fractures, &c.; again, we have various operations on veins, such as the operation for varicose veins, which are now constantly performed, and which were formerly looked on as excessively dangerous, even when done subcutaneously; we have the radical cure of hernia, which in the hands of some surgeons is, I may say, an operation of almost weekly performance, and one which is not only safe, but which yields most highly satisfactory results; we have the extensive operations on the breast and axilla for cancer, operations which now, owing to the extent and freedom with which they can be performed, promise permanent cure to a very considerable proportion of patients; we have operations on tuberculous glands in the neck, where the whole structures of the neck are opened up with a freedom which could not possibly be employed if we feared the occurrence of sepsis, and which relieves the patient not only of a long continued and very disfiguring local trouble, but of a source of probable contamination to the system; we have the various operations of abdominal surgery, which are too numerous and extensive to mention; and we have various alterations in our rules of procedure—for example, in the case of senile and diabetic gangrene. Where formerly operation was postponed or altogether avoided, on account of the risk of inflammation or gangrene of the flap, we now, being able to avoid these risks, find that a much larger proportion of cases recover with early amputation. I might enumerate many more examples of the enormous alteration which has occurred in surgical practice during recent years as the result of the attention which has been paid to the treatment of wounds; and not only might I refer to many other operations which are performed through unbroken skin, where one may now confidently reckon on the avoidance of septic complications, but I may also mention the fact that even in operations where mucous surfaces are interfered with, and where consequently stringent asepsis is impossible, our present knowledge enables us to divest these also of a great deal of their danger.

What is the history of these changes but the history of the advances in wound treatment? I have already stated the views on wound treatment, the methods of carrying them out, and the practice established on the experience gained by these methods at the time when Lister first commenced his experiments. As I have said, up to that time the majority of surgeons looked on the air, and most usually on the gases of the air, as the chief noxious agents, and it was only a few who recognised that the mode in which the air exercised its hurtful effects was by producing decomposition in the discharges of the wound. Among those who recognised this fact to the full as the result of his experiments was Lister, and from a comparatively early period in his work he came to the conclusion that if he could only in some way or other prevent this decomposition in the wounds, he could thereby prevent many of the serious accidents which

followed operations. A consideration of various clinical facts, such as the absence of decomposition in extensive effusions of blood in the subcutaneous tissues, even when the gases of the air had gained access, as, for example, in cases of fracture of ribs or clavicle, with extensive effusion of blood into the tissues, and with, at the same time, puncture of the lung and the escape of the air into this blood, showed him that it could not be the gases of the air which were the causes of this decomposition. Lister's mind was further prepared for his future work by the extensive researches he had been making into the nature of inflammation, and it was while under the influence of these researches, and while still puzzling over the causes of the putrefaction of the discharge, that he read the celebrated paper which was published by Pasteur on spontaneous generation, in which he demonstrated that it was not the air which produced decomposition of organic fluids, but that it was particles present in the air, and, further, that these particles were living bodies belonging to the class of the lowest forms of vegetable life. Lister at once saw that here lay the solution of the mystery, and that the putrefaction of the discharge in a wound was not due to the air, but to these organisms which entered it from without, just as similar effects were produced in Pasteur's flasks, and he at once cast about for some agent which would destroy these organisms. Experiments—I think in connexion with sewage—which had been made with carbolic acid as a disinfectant led him to employ that substance, and as the carbolic acid which he first obtained was extremely crude and imperfectly soluble in water, he used it in its pure state. His first experiments were made with compound fractures, and he filled the wounds with the liquid carbolic acid, thereby forming a cake of blood and carbolic acid, and the results were surprisingly successful. At that time nothing was known as to the life-history of the particles that produced decomposition, as to the existence of different kinds producing different effects, as to the exact action of chemical substances on them, as to their relations to the living body, as to the mode in which they produced general infection, and so on. The whole system was simply based on the crude fact that certain living particles existed, and during their growth in organic fluids produced certain changes in them, that the organic fluids so altered, if present in a wound, acted as poisons to the body, that the troubles which so often followed wounds were distinctly related to the putrefactive changes occurring there, and consequently to the living particles which produced these alterations, and that the aim to be placed before the surgeon was the destruction of these particles, or the prevention of their action. That there was truth underlying these assumptions was at once evident from the striking results obtained in the treatment of compound fractures, for in place of almost all the cases dying or requiring amputation, as had up to that time been the rule in his hospital, Lister was able at once to show a very brilliant series of recoveries. But it is the type of a great mind that it does not stand still, that it is always dissatisfied with its work, and always searching for greater perfection, and so Lister did not remain long satisfied with the results which he obtained with strong carbolic acid, brilliant though they were. He found that the strong carbolic acid was a caustic to the tissues and also led to the exudation of a large amount of fluid from the wounds, and he very soon saw that some modification must be introduced into the plan if it were to become more universally applicable, and more especially if it were to be employed in the treatment of wounds made by the surgeon and not limited to those inflicted accidentally. He formulated the principles that means must be taken to prevent the access of these living organisms to the wound during the performance of operations, and that dressings must be applied which would prevent their entrance afterwards. At that time he supposed that the air was the greatest carrier of the dangerous organisms, but that they were also present in all dust, and also that it was the putrefactive changes which were of importance. With these objects in view he proceeded to dilute the carbolic acid with oil, and as this oil could not of course do as a permanent dressing for the wound he mixed it with whiting so as to form a putty, which he employed as a dressing after the operation. Thus the advance which he made was that he was able to operate on fresh cases without at the same time destroying the skin or over-irritating the part, as was previously the case with the crude carbolic acid, his method being to pour the carbolic oil into the wound while the operation was being performed, to immerse the instruments in oil and so forth, and then subsequently to cover the wound, after the edges had been brought together, with the carbolic putty. But here, again, imperfections and disadvantages were numerous. Oil was a troublesome thing in the wound during the operation, and the putty applied afterwards frequently cracked and altogether was a source of great trouble and difficulty. Fortunately at this time a purer carbolic acid was obtained which was readily soluble in water, and consequently watery solutions were substituted for the oil for application to the wound and for disinfecting the instruments and hands, and attempts were made to obtain a more convenient dressing by incorporating the carbolic acid in lac plaster. Here, again, difficulties and trouble arose, and he was not long in improving his methods. It would take us too far to go into all the alterations in detail, but I may say that in the course of a few years the system came to be the employment of watery solutions of carbolic acid for the instruments, &c., the application as a dressing of gauze impregnated with carbolic acid, paraffin, and resin in order to hold the carbolic acid, and the use of a spray of carbolic acid during the operation, and the subsequent dressings under the supposition that it was necessary to purify the air. It was a considerable time before this method underwent any important alterations, although imperfections were noticed in it from time to time. Among these imperfections may be mentioned the facts that carbolic acid was in some cases readily absorbed and produced serious symptoms of poisoning, that it was very irritating to the wounds, leading to great exudation of serum and necessitating an elaborate system of drainage, and also that it was irritating to the skin and in some cases could not be employed. It was further found that cases occasionally suppurated, and though at first this suppuration was attributed to tension from imperfect drainage of the wound, it ultimately became evident that this conclusion was erroneous, and that such suppuration was really due to entrance of organisms either from faulty manipulations or more usually from inefficiency in the carbolic gauze, from leaving the dressings on too long or from imperfect disinfection of the skin. A very important point about these occasional suppurations—which, by the way, I may say were very rarely profuse—was that the pus had no putrefactive odour, and consequently it became evident that, at any rate, all the organisms which caused wound troubles did not produce putrefaction, but that they must be of different kinds, and that the putrefactive change was not necessary to suppuration. Nevertheless, although this was clearly stated by Lister soon after he observed it, it was a long time before people got rid of the idea that the putrefactive change was the only important one, and one constantly heard of wounds which were sweet, or, in their opinion, aseptic, though suppurating. At the present time we know that the pyogenic organisms, which are the ones to be chiefly avoided, do not produce any putrefactive change, and that the test of asepsis in a wound is not only absence of smell, but absence of every trace of suppuration—a great widening of the basis on which the antiseptic system was founded. Various other observations were made by Lister, which also had the effect of extending the theory which formed the basis of his system; but I need only refer to the fact that he pointed out from a very early period that the tissues of the body itself must exert a very powerful action in destroying bacteria. He used to refer more especially to harelip, cleft palate, &c., in which organisms certainly gained entrance to the wound in large numbers, but which, nevertheless, usually healed without suppuration, as showing, not that bacteria were innocuous (for that was certainly not the case), but that the tissues had a great power of destroying them or of preventing their action.

With the introduction of the methods of staining bacteria by Koch, and the employment of better microscopes, and of the various methods of cultivation, we have had the development of the great and extensive science of bacteriology, and information is constantly being added which shows that the original crude conception of septic troubles in wounds, while in its essence correct, was quite imperfect. Results were obtained which showed what the real organisms which caused suppuration and septic diseases were, and that they did not produce putrefaction; that the putrefactive change *per se* was not by any means the most dangerous change in the wound, although the substances formed during this fermentation were extremely toxic, giving rise to fever, and in larger quantities to the symptoms known as septic intoxication.

Numerous facts were obtained as to the modes of growth of these organisms, their relations to air, to oxygen, and more especially to heat, to various chemical substances, and to the animal body itself. Facts were also accumulated as to the places where the pyogenic organisms were found outside the body. It was shown that they inhabit certain parts of the skin, that they cannot withstand drying for any considerable length of time, and therefore are comparatively infrequent in the dust which floats in the air; and all the facts which were accumulated strengthened the basis of the antiseptic system in so far as they showed that suppuration and the various septic diseases could not occur without the intervention of micro-organisms.

As a matter of fact, during this period of partial standstill in the elaboration of the methods the theoretical basis was being strengthened and widened in a great variety of ways, and then attempts were again commenced to improve the methods and bring them as completely as possible into unison with these advances in bacteriological knowledge. Among other things, efforts were directed to finding a better antiseptic than carbolic acid, one equally efficacious as a disinfectant, but less poisonous and irritating, and as from time to time various substances, such as thymol, salicylic acid, boracic acid, &c., were brought forward as fulfilling these conditions they were thoroughly tested, but in most cases with unsatisfactory results, and curiously enough one has always had to come back to carbolic acid as the best and the most reliable antiseptic which we possess; and it still holds a pre-eminent place among the means at our disposal for antiseptic work. The only antiseptic substance which has really disputed the position of carbolic acid has been corrosive sublimate, which for some time was held to be in every way better; but even corrosive sublimate has, as the result of recent work, fallen from its pre-eminence, and although it has now taken its place as a substance to be largely employed in the treatment of wounds it has not been able entirely to replace carbolic acid.

The facts which have been demonstrated as the result of experiments with regard to the various kinds of bacteria which are present in the air, and with regard to the fact that the true putrefactive bacteria cannot live in the living body, showed that owing to their inability to resist drying the pyogenic organisms were rarely present in the air in a living state, and that therefore attempts to disinfect the air by means of a spray were quite unnecessary, even if they had been effectual. As a matter of fact, it became evident that the spray was not really effectual in killing the spores of the putrefactive bacteria, and besides that, in so far as these spores were concerned, the tissues of the body itself were able to dispose of them; hence the time came when it was quite evident that the spray could be given up as being an unnecessary complication of the method. Indeed, long before the spray was given up we had pointed out that it was quite unnecessary, because irrigation of the wound during the operation was really much more effectual. The difficulty, however, in giving it up was the fact that the fluids at our disposal before the introduction of corrosive sublimate, for purposes of irrigation—viz., solutions of carbolic acid—were very irritating to wounds. On the introduction of corrosive sublimate, which was supposed to act powerfully in very weak solutions, we had placed at our service a substance which could be freely applied to a wound in weak solutions without doing any harm, and for this reason, as well as for the one formerly mentioned, the spray was at once discarded. Although, however, the spray of carbolic acid did not kill the spores of the putrefactive bacteria, and although, except in unhealthy hospitals, the pyogenic organisms are probably but rarely present in the air, still I believe the spray was of great value, and that had it not been for its use we should, in the then state of bacteriological knowledge, have had to fall back very soon on the former methods employed by Lister of oily and watery solutions freely applied to the wounds. For at that time the distribution of the organisms was not known, the kinds of the organisms and their septic power were not clearly established, and the spray, while it might not disinfect the spores of the bacteria in the air, really acted as an irrigator constantly bedewing the wound with an antiseptic substance, and, what was much more important, bedewing the hands of the operator and his assistant with a solution of carbolic acid, and thus correcting errors which they may have made in their manipulations. It is true that if the operation is done in a pure atmosphere, and if everything that comes in contact with the wound is carefully disinfected, irrigation is not absolutely necessary, but if the solutions employed are not too strong it does not hurt the wound and is a great additional safeguard.

Apart from the introduction of new disinfectants and the abolition of the spray, other changes have been carried out which now render the Listerian method of treatment simpler and more certain than it was before. Greater care is now taken in the disinfection of the skin of the patient, of the hands of the operator, of the instruments, ligatures, stitches, &c., in accordance with the results of bacteriological research. The skin is now thoroughly purified, as a rule, not merely by the application of carbolic acid lotions, but by the employment of substances to dissolve the fat, nail brushes to scrub away the dead epithelium, and so on; the instruments are disinfected either as formerly by carbolic lotion, or by boiling, and greater care also is taken in the disinfection of the ligatures, silk, &c., either by more prolonged immersion in carbolic lotion or by boiling; sponges also are more carefully attended to, being in my own practice handed in a sublimate solution, and being by others discarded in favour of pads of aseptic wool. Dressings have also been very much improved, and the old carbolic gauze has been practically entirely abandoned. The best dressing in my experience is the last which has been introduced by Sir Joseph Lister—namely, the gauze impregnated with the double cyanide of zinc and mercury, which is soaked in carbolic lotion or weak sublimate solution before application. I need not enter into details as to these matters, because I have just published a little book on the subject. A great advance has also been made, in that drainage of the wounds as formerly employed has been given up to a very great extent, and this has resulted from the fact that the wounds are not now irritated by the application of carbolic acid, either as lotions or spray, and it is found that with certain exceptions drainage may in most cases be entirely omitted; and again, with the omission of drainage and the introduction of the new gauze, which is non-irritating and yet powerfully inhibitory as regards the growth of bacteria, and also with the abolition of the mackintosh, it is found possible to leave the dressings unchanged practically from the time of the operation till the wound has healed, the dressings, which are applied damp, very quickly drying, and thus giving the additional advantage of dry dressings. The results of all these changes have been the great simplification of the methods and diminution of the labour, and, at the same time, a very marked increase in the certainty of the results; in fact, they are now so constant and certain that I did not hesitate in the little book on "Wound Treatment" which I have just published to place in a prominent position the statement that suppuration occurring in a wound made by the surgeon through previously unbroken skin is the result of some oversight or error on his part. The more experienced a surgeon becomes with this work, and the greater care he takes, the less likely is he to have suppuration, and at the present day pus in a wound made by a surgeon through unbroken skin is a thing which ought not to be seen. If it does occur, the fault is the surgeon's, and he must look to it that the same error is not committed again; for it must be remembered that the presence of pus, however small in amount, implies the presence of pyogenic organisms, and that these pyogenic organisms, while they locally set up suppuration, are able also, when they penetrate into the body under suitable conditions, to set up the terrible septic diseases which were formerly the scourge of surgery—namely, septicæmia and pyæmia—and, therefore, if they enter the wound at all, it passes out of the power of the surgeon to prevent the occurrence of these diseases should circumstances favour their development.

As the result of Lister's work attention was very soon directed to the subject of the treatment of wounds in a way which had never been the case before, and it was very soon recognised by thoughtful surgeons that his view, that the subsequent troubles were intimately connected with decomposition in the wounds, was the correct one. While, however, this was recognised, and while some took up enthusiastically the absolute Listerian method and followed closely the improvements which Lister made in his methods, a certain number only carried out the treatment imperfectly, and some, indeed, while avoiding the grosser contamination of wounds, did not take any further precaution; in all these cases a certain amount of improvement resulted. Naturally this was greatest in the hands of those who followed the strict Listerian method. They found that septic diseases disappeared in exact accordance with the

success which they obtained in excluding bacteria from the wounds, and at the same time that septic diseases disappeared suppuration did not occur, traumatic fever was absent, and the wounds healed either by first intention when the edges were brought together, or by blood clot when they were left open. Even those, however, who took up the method imperfectly obtained a very marked improvement over their former results, and I must confess that I find it very difficult to understand the state of mind of men who, obtaining such marked improvement, did not follow matters to their logical conclusion and take up the Listerian method in its entirety. One would have thought that, when they found such a marked difference from their former results on diminishing the number of bacteria admitted to wounds, they would naturally have gone on to the complete and rigid exclusion of these bacteria. I can only explain it by supposing that, their former results having been very bad, when they obtained this marked improvement, this diminished frequency of septic disease and the absence of profuse suppuration, they thought they had gained all that was to be gained; that the smaller amount of suppuration did not impress them as a serious matter; and that as the result of their former teaching they looked on it and on the traumatic fever as more or less inevitable—that is to say, they did not accept the scientific basis of the treatment and thought that the statements of those who supported strict asepsis were coloured by enthusiasm and by bad observation. However that may be, the fact remains, as we would now naturally expect from our bacteriological knowledge, that even though bacteria are not rigidly excluded a great improvement will be obtained over the methods in which no care whatever is taken with regard to their exclusion; but the results thus obtained in no way compare with those obtained by rigid asepsis.

Some surgeons have been so satisfied with the results obtained by partial asepsis that they have combated the necessity of employing more accurate measures. It is more especially in the case of abdominal surgery that this question has arisen. As I have already mentioned at the commencement of this paper, in former days the peritoneum was regarded as one of the most dangerous structures to interfere with, and with that view in mind, when it was found that even without rigid asepsis, but with careful attention to the avoidance of gross contamination, operations could be often performed safely on the peritoneum, and the dangers of poisoning with the antiseptics used could thus be avoided, it was too hurriedly assumed that therefore strict asepsis is unnecessary elsewhere. Researches have now shown that the peritoneum, instead of being one of the most dangerous tissues in the body in reference to sepsis, is really the least dangerous, and that it has a most remarkable power of protecting itself against infection, a power far beyond what is possessed by any other tissue. Hence it so happened that those who were opposed to rigid asepsis had experimented with the very structure in which they were least likely to meet with difficulty, and their conclusions drawn from peritoneal surgery prove to be erroneous; but even in the case of the peritoneum those surgeons who do not employ rigid asepsis have occasional misadventures, and if they employ the same measures in the case of cellular or muscular tissue the results at once fall behind those obtained by strict asepsis, in that suppuration frequently occurs, recovery is often prolonged, and the patient may die from aseptic disease. Nevertheless, the facts with regard to the peritoneum were so striking that they led to further researches being made which added to our knowledge of the protective arrangements of the body against bacteria, and which showed what conditions were necessary for the growth of organisms in the body, conditions which I have fully discussed elsewhere, and which I need not here enter into. While these imperfectly antiseptic methods are, in my opinion, not worthy of imitation when compared with methods which aim at the complete exclusion of bacteria, they have nevertheless been of service when considered in connexion with experimental bacteriological work. More especially they have emphasised what Lister pointed out long ago—viz., the action of the body in destroying bacteria—and they have encouraged surgeons in their efforts to diminish the amount of antiseptic substances brought in contact with wounds. Efforts have recently been made to combine the principle of total exclusion of infective organisms with the avoidance of antiseptic solutions, the body being left to deal with the saprophytic spores which fall into the wound from the air. The result has been the development, especially abroad, of the method of asepsis as compared with the use of antiseptics, and I must now say a few words about this method. In carrying out this aseptic method care is taken to disinfect everything which comes in contact with the wound, and the precautions adopted in carrying out the treatment are naturally still more stringent than those employed in the Listerian method. The use of antiseptics is limited to the disinfection of the skin of the patient, the operator, and his assistant, and this disinfection is carried out with the greatest rigour, substances being employed in the first instance to remove the fat, and subsequently antiseptic lotions being applied for a considerable time. Here the use of antiseptic solutions ceases and the disinfection of all the other materials is carried out by heat. The instruments, which must be altogether metal, are boiled for at least ten minutes, the boiling point of the water being raised by the addition of salt to it; the silk and other materials used for ligatures and stitches are also boiled, and the only fluid which is applied to the wound or to the instruments after disinfection is water sterilised by heat. The materials used as dressings do not contain any antiseptic substances, but are disinfected by exposure to dry heat at a temperature considerably above the boiling point for one to three hours, and the case in which these materials are heated is not opened till they are to be applied to the wound. These dressings act solely as filters, catching the dust and preventing its access to the wound. Theoretically this method is fairly accurate, and there is no reason to doubt that complete success could be obtained with it under proper circumstances, but practically it is an extremely difficult plan to carry out successfully whether in hospital or in private practice. In hospital the dust of the air is very often not so innocuous that its entrance into the wound can be looked on as a matter of indifference, and many of those who carry out this aseptic plan rigorously take special precautions against the air in the operating room. In some places the audience is separated from the operators by a glass screen, and the air which enters the part of the theatre devoted to the operation is filtered through cotton wool. In private practice it is naturally a matter of great difficulty to boil instruments, to carry metal cases containing aseptic dressings, and so forth; in this method, also, if any accidental mistake should occur during the performance of the operation—if, for example, the hands of the operator or his assistants, or the instruments or ligatures, come into contact with blankets or other sources of contamination—such mistakes cannot be readily rectified, if at all; hence the method requires the most extreme care, and it is only a skilled bacteriologist who can feel confidence that he can carry it out successfully. That being the case, it is not, I think, a method which is of anything like universal application, or one that can be substituted for the antiseptic method.

Let us contrast this method with the Listerian plan. In both of them the disinfection of the skin is the same; the disinfection of the instruments, silk, &c., may also be carried out in the Listerian plan by boiling, but when we remember the rapidity with which a 5 per cent. solution of carbolic acid destroys pyogenic organisms it seems unnecessary to complicate matters in this way, and I should only recommend the boiling of instruments where they had been previously employed in operations on cases where infective spore-bearing bacteria, such as the tetanus bacillus, had been present. In the Listerian method the instruments &c. are placed in carbolic acid, and I should advocate that this be done, even although they have previously been boiled. The only objection which can be urged to this by those who uphold the other method is the irritation of the wound by the carbolic acid conveyed to it by the instruments, but the amount of carbolic acid so conveyed is extremely slight, and, indeed, in my own practice no carbolic acid is carried in this way, for in most cases before introducing the instrument into the wound it is rinsed in a weak sublimate solution, which is only very slightly irritating to the wound. Even if the instruments were transferred directly from the carbolic lotion our experience teaches us that the small amount so introduced is absolutely of no consequence. And the advantage of carbolic acid or other antiseptics for this purpose is that if any accidental contamination should occur it can be at once rectified by the antiseptic lotions; or, again, if, as not uncommonly happens, an instrument is forgotten or is wanted in a hurry, it is perfectly easily disinfected by dipping it for a few seconds in undiluted carbolic acid and subsequently washing away the pure acid by the carbolic or sublimate solutions, whereas with the other

method the instrument would have to be boiled, and one cannot stop an operation for ten minutes to wait for a new instrument to be boiled. Similar facts might be stated with regard to the use of sponges &c. in the two cases. In the aseptic plan no correction of error is possible, and error often occurs without being noticed; while in the Listerian plan this correction is constantly taking place, whether intentionally or not, by the fact that instruments and hands are repeatedly dipped in antiseptic solutions during the progress of the operation, and that the wound (always excepting abdominal wounds) is from time to time douched with this solution. Again, the dressings in the aseptic method must be used carefully, opened with pure hands and in a pure atmosphere, and while the tissues themselves may quite easily dispose of the saprophytic organisms which fall into the wound from the air, this is not the case with the discharge from the wound, and during the application of the dressings these organisms may quite readily fall on to the skin and may set up decomposition in the fluid in the dressings, which decomposition may afterwards lead to troubles in the wound itself. On the other hand, in the Listerian plan the dressings contain an antiseptic which is sufficient to prevent growth in the discharges which soak into it, and being applied wet are also capable of actively disinfecting any dust which may have fallen on the skin during or after the performance of the operation. From this it will be evident how complex and uncertain the aseptic method is as compared with the Listerian plan.

It is thus clear that the state of matters with regard to wound treatment and wound infection is of a complexity which was not dreamt of when the antiseptic system of treatment was entered upon, and it is the most striking evidence of the genius of Lister that he seized the correct leading idea, crude though it was, and that the principles on which he started have been more and more established as scientific investigation has advanced and practical experience has accumulated. Both science and practice show us that the only two methods of treatment which are accurate are the Listerian and the aseptic methods, both of them based on the Listerian principles, for though a number of operations may be performed without septic trouble, even where rigid exclusion of bacteria from the wound is not aimed at, nevertheless a certain—and in the eyes of strict antiseptic surgeons a considerable—proportion of cases go wrong; while many operations, such as those on healthy joints, cannot be done at all. In other words, methods which do not rigidly exclude pathogenic bacteria from wounds do not offer any certainty as to the results. On the other hand, experience has amply shown that where the principle of rigid exclusion of micro-organisms from wounds is thoroughly carried out the results attain a uniformity and a certainty which are far beyond those attained by any other method; and further, as would naturally be expected, this certainty is proportional to the experience and experimental faculty of the individual, provided only that he does not attribute his accidental failures to his materials, or to the constitution of the patient, or to things beyond his own control. Provided that he attributes these failures to himself and to imperfections in carrying out the principles, this certainty becomes constantly greater as his experience increases.

Now I venture to think we are not justified in treating a patient by methods which are more or less uncertain when we have before us methods which give practical certainty; in other words, I do not think that one is justified in treating wounds on any other principle than on that of exclusion of bacteria, however good the air or however healthy the patient. Indeed, I have no hesitation in asserting that in treating wounds on any other principles than on that of the total exclusion of infective agents the surgeon is subjecting his patient to an utterly unwarrantable risk. We know that even under the best hygienic conditions cases occasionally go wrong unless they are treated strictly aseptically, and that suppurations not infrequently occur, without, it may be, doing any particular harm to the patient, but nevertheless implying the presence of organisms which only require suitable circumstances to give rise to grave and fatal septic disease. Further, these imperfect methods do not permit the surgeon to perform operations which might be of the greatest advantage to the patient, and thus he is not able to give the patient the best treatment that can be got. No other proof is needed of this statement than to point to the way in which operations, performed with perfect safety under antiseptic precautions, are still spoken of as unjustifiable both in papers and also when given by students in examinations as the proper practice.

An objection often urged to antiseptic work is that it is very complex and cumbersome. This I deny. I consider the Listerian method, as now carried out, is one of great simplicity; but even if it were very complex, seeing that it gives safety and certainty, it is everyone's duty to study it. No one thinks that the study and practice of the manual details of operations are too irksome to learn, and yet how many do not think it worth their while to give the same amount of trouble and attention to the question of what they should do with their wounds when they have made them. And yet, from the patient's point of view, this is a matter of the most profound importance. Nowadays most men who keep their heads and are not in a hurry can perform the ordinary operations of surgery satisfactorily, and hence it is not a matter of very great moment to the patient whom he gets to do the operation; but what is of infinite moment to him is that the wounds so made shall heal without pain and without risk.

A Clinical Lecture
ON
THE TREATMENT OF EPISPADIAS IN THE FEMALE AND HYPOSPADIAS IN THE MALE.

Delivered at St. Thomas's Hospital on June 13th, 1894,

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GENTLEMEN,—I propose to-day to bring under your notice two cases lately operated upon for the opposite conditions of epispadias and hypospadias. In the case of epispadias the condition of the patient was such as to make life an absolute burden—a state of things which, I think, we may justly claim to have immensely alleviated; and although the second case was attended with much less serious inconvenience, yet here also several manifest defects have been remedied, and the patient has been placed out of danger of certain complications dependent on his condition. The first case—that of epispadias—is in a female aged twenty-six. Since birth the young woman had suffered from complete incontinence of urine, which had not only not been remedied by three successive plastic operations performed at intervals of some years, but had also defied the efforts of several instrument makers to devise any form of apparatus to collect the urine. The condition of the parts at the time of admission was, shortly, as follows. The patient was well developed throughout, with the single defect of imperfect formation of the urethra. On examination the place of the normal urethral opening was taken by a large irregular aperture, allowing the posterior wall of the bladder to prolapse slightly as a cherry-like tumour; this was bounded on either side by the ununited labia minora and a bifid clitoris, while posteriorly the margin of a thin septum separated it from the vaginal canal. Into the vesical orifice three fingers could be readily introduced, but the bladder, from habitual incontinence, was extremely limited in dimensions; the symphysis pubis was united. The labia majora did not coalesce anteriorly, and between them was a broad shallow groove, at the bottom of which, extending upwards from the opening of the bladder, was a cicatrix the result of previous plastic operations directed towards the narrowing of the orifice to the dimensions of a normal urethra. The vagina was small, but otherwise well formed, the uterus apparently normal, and the patient menstruated regularly.

I will first recall to your memory the normal mode of development of the female urethra and external organs, in order to explain the occurrence of the deformity in this case, and then advert to the reasons why the previous operations had proved unsatisfactory, and why the one which has now been performed seemed the best method of relieving the condition. The urinary bladder is formed by a spindle-shaped dilatation of the stalk of the allantois, the upper pole of the spindle extending as the urachus to the umbilicus, while the lower passes towards the cloaca and forms the whole of the female urethra. The primary cloaca to which it leads becomes subdivided into a uro-genital and an anal part

separated by a transverse bridge forming the perineum. The uro-genital sinus forms a narrow vertical slit wider behind than before where it passes as a furrow into the rudiment of the clitoris. This rudiment and well-marked integumentary eminence is surrounded at its base by a circular fold of the integument, the foundation of the future mons veneris, and labia majora, the lips of the urogenital sinus forming the nymphæ. The circular fold enlarges as the labia majora, and covers the clitoris, which remains relatively small, the groove on the under surface becoming less and less marked owing to its opening out, and the backward extension of its margins in the process of development of the nymphæ. The vascular bulbs remain distinct except at one point, where they run together in the glans clitoris. Within the shortened but widened remains of the uro-genital sinus (vestibule) the urethral orifice is seen, the urethra itself undergoing considerable elongation in the course of development. (Quain.)

In considering the deformity before us we must regard it as the first stage in the development of the more serious deformity of extroversion of the bladder. The latter viscus is formed, as we have seen, from the stalk of the allantois, and in the state of extroversion is deficient as to its anterior wall, this condition being always continued to the urethra which exists as an open groove (epispadias). It has been forcibly pointed out by Mr. Shattock[1] that this condition differs materially from that of ectopion of the heart or abdominal viscera, since in these the organs are perfectly formed and merely remain uncovered by reason of deficiency in growth of the mesoblastic basis of the body wall. To explain the condition of ectopion vesicæ, therefore, Mr. Shattock suggests "that the primitive cloacal invagination of the surface which normally lays open the lower end of the rectum and the lower end of the urogenital sinus, in these cases by an undue extension forwards and upwards lays open the anterior wall of the uro-genital sinus and the anterior wall of the bladder. Thus complete fission of all the parts in the middle line as high as the umbilicus results, the rudimentary penis or clitoris on its first appearance being completely cleft. The rectum becomes partitioned off as in normal development from the uro-genital sinus and the perineum formed, thus in the female the bladder and urethra and the clitoris are completely cleft, and an interval is left between the bones, which should be normally united at the symphysis."

This explanation completely meets the case before us, the process of fission having extended to the neck of the bladder only, the pubic symphysis and anterior wall of the bladder remaining uncleft. The condition of uncomplicated epispadias in the female is rare, although several cases have been put on record, and of these a number have been treated by the narrowing of the orifice by plastic operations, apparently with some degree of success.

In the case before us such measures had proved quite unsuccessful, and this appeared to depend on two conditions: first, the absence of any properly arranged sphincter mechanism—a defect, however, which one would expect to be always present, although, perhaps, in varying degree; and, second, the tendency on the part of the posterior wall of the bladder by reason of the insufficient support afforded it anteriorly to prolapse through the opening. This latter condition was well marked in our case, any expiratory or expulsive effort causing considerable protrusion and consequent dilatation of the opening. Consideration of these difficulties led me to suggest to the patient the substitution of a supra-pubic urethra for the existing aperture and the complete closure of the latter. To this she readily consented, and a supra-pubic cystotomy was performed, the only difficulties met with being due to the limited capacity of the bladder. When the incision was carried through the abdominal wall, the peritoneal fold was found to extend right down to the symphysis. The serous covering, therefore, had to be carefully stripped from the bladder wall, a process rendered the more easy by the fact that a finger could be readily introduced from below and the viscus pushed up. The opening in the bladder wall was made with a large trocar and cannula, as it was evident that the union of the mucous membrane of the bladder to the skin would be attended with too much tension to be effective. This method also, by interfering little with the muscular wall of the bladder, perhaps offered better chances of obtaining some sphincter apparatus later. The patient was then removed to bed, a piece of drainage-tube being carried through the new and old openings and tied over the symphysis to maintain the new fistula pervious. Two weeks later the edges of the lower opening (which had already contracted somewhat as a result of the supra-pubic drain) were split by a circumferential incision, and the mucous membrane, having been slightly dissected up, was united by Lembert's sutures passed on the raw surface so as to invert the mucous surface. A second set of sutures was passed through the raw surface on each side, and when these had been tied a third series was inserted to unite the cutaneous margins. In this way a firm closure of the lower opening was effected, and this healed almost entirely except for a small fistula, which needed to be closed later. An apparatus similar to that employed to collect the urine from a supra-pubic opening in the male was then fitted, and since the patient has been able to sleep without wetting the bed and to keep herself absolutely dry during the day. It should further be noted that since the closure of the lower aperture the bladder has steadily increased in capacity, and that the urine, in place of running constantly away, is now passed at intervals in gushes into the artificial receptacle. I think that this method, as simple and effective, will probably prove more successful in the future than plastic operations alone have in the past; at the same time it must be owned that it is more suitable for an adult than a child, both by reason of the greater size of the parts to be manipulated and of the greater likelihood of the patient managing the artificial receptacle properly.

The second case is of a less serious nature, and concerns the floor of the urethra. The male urethra in the anterior portion is formed by the closure of the groove on the under aspect of the genital tubercle, the lips of which in the female remain as the labia minora. This closure takes place from behind forwards, and more or less extensive deficiencies in the floor of the urethra are often met with in the male subject from failure of the process to extend far enough anteriorly. The condition of hypospadias thus produced may be limited to the glans, an open groove then taking the place of the canal, and the urethra may terminate by a small opening, often pinhole in size, in any part of the under surface of the penis; a groove may then exist in the proper line of the urethra on the under surface of the glans; or a pouch, the deep termination of which forms a septum separating it from the opening of the urethra, may be found; or the glans may be quite imperforate, not grooved, but usually marked by a vertical line in the position of the normal meatus. In all these cases the prepuce is ununited below, and in young children forms a dorsal cushion of an unsightly aspect. The penis may further be ill-developed and bound down to the scrotum by bands. Rarer cases are those in which the scrotum remains bifid, the two halves separated by a deep groove, and the urethra opens in the perineum.

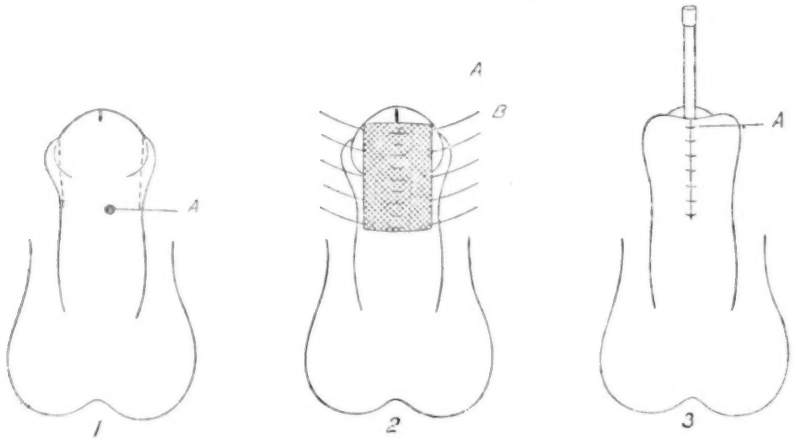
In the case before you, that of a child two years of age, the condition was as follows. The glans was imperforate, but marked with a ridge indicating the proper situation of the meatus. The prepuce, ununited below, formed a dorsal cushion only partly clothing the front of the glans, no trace of a frænum existing. The penis was free from the scrotum and otherwise fairly developed. The opening of the urethra was situated at the junction of the anterior with the middle third of the under surface of the penis, not strictly median, and pinhole in size. The boy complained of pain, and cried when he had to pass his urine. As you see, the prepuce is now united below, the urethra opens at the end of the penis, and there is nothing strikingly abnormal in the appearance of the parts.

To remedy the former condition, the following small operation, on the lines of that advocated by Thiersch for epispadias, was performed. The urethral opening was enlarged and an incision made into the glans penis to a depth corresponding with the length of the vertical line at the end indicating the normal urethral aperture. An incision was now made on either side of the central groove and two small skin flaps raised (Fig. 1); these were united by Lembert's sutures passed on the raw aspect, and in this way the skin was inverted to form the floor of the future anterior end of the urethra. (Fig. 2.) A second tier of sutures was now passed through the raw surface left by the raising of the flaps, and a third tier uniting the skin was inserted, these second two tiers having the result not only of thickening the floor,

[1] Trans. Path. Soc., vol. xxxviii., 1887, p. 170.

but also of uniting the prepuce around the end of the organ. (Fig. 3.) A catheter was passed into the bladder and retained three days, when it became blocked and was withdrawn, no attempt being made to reintroduce it for fear of disturbing the union of the flaps. For some weeks a portion of the urine escaped from a small fistula at the posterior portion of the suture (corresponding to the junction of the new and old urethra), but since that time the whole has been passed from the end of the penis in normal fashion.

I may note in passing that I have successfully employed this three tier suture in a case of penile fistula in the adult, a condition usually troublesome to treat. In neither case micturition, and in adult life I have met with a case in which a slight inflammation of the penis led to complete occlusion of the orifice and consequent retention, leading to extravasation of urine. Again, should a sufferer from this deformity contract gonorrhœa, it is extremely troublesome to treat, the obstruction to the passage of urine being well shown by the tendency of the gonorrhœal discharge to collect in the urethra, and the consequent frequent extension of the inflammation backwards. Beyond these points, the impossibility of ejecting the stream of urine forwards is a manifest inconvenience, and when the opening is far back the escape of the semen at the root of the penis may render the subject of the deformity



1. Urethral opening. Dotted lines show position of first incisions.

Skin flaps inverted and sutured. Second tier of sutures passed on raw surface (*B*).

Third tier of sutures tied and prepuce completed.

have the sunk sutures of fine horsehair given rise to any trouble. In relating this case I would suggest that the above method is suitable for especially those cases in which the abnormal orifice is near the anterior part of the penis, and that it possesses a considerable minor advantage in uniting the prepuce and thus removing an element of great unsightliness. The slightest degrees of hypospadias, where the defect does not pass beyond the glans and the urethral orifice is wide, give rise to so little trouble as to generally demand no treatment. When, however, the opening is further back, and especially when it is contracted, it is a condition of some importance. In childhood it may give rise to both pain and difficulty in practically sterile. These reasons, I think, render the performance of a plastic operation advisable in a somewhat larger number of cases than it appears to be undertaken. The provision of a cutaneous floor to the urethra by the method above advocated renders the formation of subsequent stricture an unlikely occurrence, and hence the patient is practically placed in a normal condition. The age at which the operation should be performed varies with circumstances, but I should think two years is, perhaps, the earliest limit, and it stands to reason that the operation is easier to perform, and more likely to be attended with success, when the penis is large enough to lend itself to shaping.

A COMPLETED CASE OF MULTIPLE ANEURYSM IN WHICH ONE BRACHIAL AND BOTH EXTERNAL ILIAC ARTERIES WERE LIGATURED.[1]

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ON Sept. 19th, 1890, by the recommendation of Dr. Hector of Drighlington, a man aged twenty-three years consulted me on account of a painful pulsating swelling in front of the left elbow. The pain had been felt for eleven or twelve weeks, and the swelling first attracted notice six or seven weeks before I saw him. Both were increasing. The tumour was not well defined, being widespread rather than prominent, but confined to the bend of the elbow. The usual signs of aneurysm were well marked; pulsation was visible and expansile. The tumour could be made to completely disappear by pressure, and on removal of the pressure it returned by leaps synchronous with the beats of the heart. The pulse at the wrist was small compared with that in the right limb, and a musical bruit attended the rush of blood through its interior. The patient was a healthy-looking, well-built, fairly muscular young man, whose appearance was not suggestive of weakness or disease. He was steady, active, and industrious; he had never contracted any venereal disease, and he presented no signs of inherited syphilis. He had been accustomed in the course of his work to lift heavy weights, but he was not left-handed, and he was not aware of having at any time injured his arm. An examination satisfied me that he was free from heart disease, and that his organs were generally healthy. He came to Leeds for treatment, and on Oct. 17th I tied his left brachial artery in the middle of the arm, using a silk ligature and securing an aseptic wound. The tumour was slow in disappearing. On Nov. 22nd I noted that it remained undiminished, though soft and non-pulsatile. On Dec. 13th it was rather less and firmer, and on the 28th decidedly less and hard, whilst the radial pulse had reappeared at the wrist. Soon afterwards he resumed his work, which consisted for the most part in looking after a few men and boys in his employment as shoemaker, and he remained quite well until Feb. 3rd, 1892, on which day, after hurrying to catch a train, his left leg became unusually tired. Two days afterwards he noticed a swelling at the top of his thigh, and a day or two later, when I again saw him, there was a well-marked aneurysm of the size of a hen's egg occupying Scarpa's triangle, which it almost completely filled. On Feb. 16th, with Dr. Hector's assistance, I tied the left external iliac artery by the "Astley Cooper" operation. A four-inch incision parallel with and about an inch above Poupart's ligament, and commencing just outside the anterior superior iliac spine, was carried through the tissues down to the peritoneum, which was then stripped up

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Nov. 2nd, 1894.

from the pelvic brim. In doing this, owing, I thought, to the very delicate structure of the transversalis fascia (a mere transparent film), the peritoneum was opened, allowing a portion of omentum to protrude. The omentum was returned within the abdominal cavity, and the wound in the peritoneum was closed with fine silk sutures. An aneurysm needle armed with strong chromicised catgut was then passed beneath the artery, and the vessel was tied in such a manner as to occlude, without strangling, the coats. His recovery was an uneventful one, and he was able to return home on April 23rd. It is worth noting that at this time the left limb had perceptibly lessened, and on measurement it was found that there was a difference of an inch in the circumference of the two limbs both in the thigh and calf. When seen a month later, walking with the aid of a stick, he declared himself to be quite well; in appearance the limb was natural; a hard, marble-sized body represented the aneurysm, and I could not detect any pulsation in the arteries of the thigh or leg.

After the second operation the patient remained quite well until July, 1893, when he had an attack of acute phlebitis in the right thigh and leg, and a swelling formed in the right inguinal region immediately above Poupart's ligament, which upon examination proved to be an aneurysm of the external iliac artery, of about the size of a pigeon's egg. I sent him upon this occasion into the Leeds Infirmary, where he was kept at rest in bed until the veins had recovered, and on Aug. 30th I tied the right external iliac artery by the transperitoneal method. The artery was reached through a three-inch incision made in the linea alba, midway between the umbilicus and the pubes. On packing the intestines away from the pelvis by means of two or three flat sponges a most satisfactory view was obtained of the iliac arteries as they coursed near the brim of the pelvis. A catgut ligature was passed round the external iliac artery, and the vessel was occluded as in the former operation, care being taken not to constrict the coats too tightly. Again he made a satisfactory recovery, and on Oct. 11th he went home. On Nov. 6th he came to show himself, and with the exception of a blocking of the right saphena vein his condition was all that could be desired.

On July 19th, 1894, Dr. Hector summoned me to the patient's house on discovering a pulsating swelling in the left iliac region which had gradually developed during a week of pain in the lumbar back and in the front of the left thigh. The tumour was of large size, extending widely above Poupart's ligament, and it pulsated visibly through the abdominal wall. It was arranged that he should be removed by ambulance to the infirmary on the following day, but during the night he became collapsed, and died on the morning of the 20th.

Necropsy.—Dr. Hector was able to obtain an inspection of the abdomen, and, besides sending me the specimens exhibited on the table, he reported that beneath the peritoneum, on the left, extending from the pelvis to the diaphragm, there was an immense blood-clot, the origin of which was found in a ruptured aneurysm developed on the left internal iliac artery. The specimen shows this aneurysm to be of the size of a Tangerine orange laid open, together with the internal, the common, and the external iliac arteries. Death was due, no doubt, in great measure to hæmorrhagic collapse, and was aided, Dr. Hector believes, by an acute obstruction of the colon, symptoms of which, including fæcal vomiting, he had observed during the previous three or four days, due to the mechanical pressure upon the intestine of the rapidly formed hæmatoma.

Remarks.—To this bare narrative of facts I have little to add. The recorded cases of multiple aneurysm in the limbs are not very numerous, and those to which I have been able to make reference were published before their course had been run. In the *Medical Times and Gazette* of Oct. 11th, 1862, the late Mr. George Lowe of Burton-on-Trent published a remarkable case in which there were three aneurysms—viz., an inguino-femoral and a femoral in the left leg, and a popliteal in the right. The femoral aneurysm having become diffused, he amputated the left limb below the inguino-femoral aneurysm, which, together with the right popliteal, he afterwards successfully treated by compression. In 1877 Mr. Oliver Pemberton,[2] and in the same year Dr. Wm. Macewen,[3] recorded cases treated respectively by ligation and by the introduction of a needle into the interior of the aneurysmal sac after the manner which has since become familiarly associated with the latter's name. In these papers references are made to former publications, but in none, so far as I have been able to ascertain, is there any attempt to throw light upon the pathology of this so-called aneurysmal diathesis. The occurrence of several aneurysms in the same youthful individual would suggest the presence of some general defect in the arterial system, possibly some congenital weakness. Dr. Trevelyan and Mr. Moynihan have examined sections of the patient's arteries, and report that, with the exception of a few small cells scattered throughout the middle coat, they are unable to detect any deviation from the normal structure. The treatment of surgical aneurysm is a very wide subject, and I will content myself with the remark that, whilst in my earlier years I practised the various methods in vogue, including compression of the vessel between the aneurysm and the heart, compression of the aneurysm itself by flexion of the limb, Ferguson's method of stopping the current of blood by disturbing and detaching portions of the coagulum already formed in the sac, and others, I have, since the introduction of aseptic surgery, come back with ever-increasing confidence to ligation of the afferent vessel, as, upon the whole, the safest and most satisfactory mode of securing the end in view—viz., the obliteration of the aneurysmal swelling.

Leeds.

[2] THE LANCET, July 28th, Aug. 4th and 11th, 1877.
[3] THE LANCET, Oct. 13th, 1877.

THE TREATMENT OF ANEURYSMS OF ARTERIES OF THE EXTREMITIES BY EXTIRPATION OF THE SAC.[1]

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THE subject I am about to consider is the treatment of aneurysms affecting the arteries of the extremities. The treatment I carried out in the two cases recorded in this paper takes the reader back at least a hundred years, when an operation of a somewhat similar kind was successful in the hands of an Italian surgeon named Guattani; but since the introduction of the Hunterian operation in 1785 it has not been often repeated. The personality of Hunter being very dominant, the principle of his operation (whether by actually tying or by pressure, either digital or mechanical) was looked upon as an almost final development of perfection, so that the older methods have been scarcely considered in the light of anæsthetics and aseptic surgery. I will now give the notes of the two cases and will then state my reasons for adopting this particular plan of treatment.

CASE 1.—A man forty years of age was admitted to the Leeds General Infirmary on July 5th, 1893, under the care of Dr. Barrs. He complained of pain of the right upper extremity, some swelling above the shoulder, and of cough. He had an aneurysm in the upper part of the thorax either of the arch of the aorta or the innominate artery, and another in the left femoral artery. The patient was transferred to Mr. Atkinson. I took charge of the case soon after this as Mr. Atkinson was going away. As regards history, the patient had always been a healthy man. His father died from "a stroke." There was no other family history of importance, nor was there a history of syphilis or gout. The patient had suffered from rheumatism. He had taken beer freely, but not spirits. Twenty-six years ago he had some necrosis about the right ankle and wrist. Concerning the present illness, eighteen months previously he had pain at the back of the right shoulder; twelve months before he noticed a swelling above the inner end of the right collar-bone; and nine months previously the pain in the shoulder was replaced by a tingling down the arm, this being very marked in the arm-pit. During all this time he had a troublesome cough. Three months previously (in June, 1893) he noticed "a small swelling in the middle of the left thigh"; it varied in size, but had gradually increased, causing some pain in walking, but not of a marked character. The patient was a fairly healthy-looking man, and was well nourished. As stated above, there was an aneurysm in the upper part of the thorax, either of the arch of the aorta or the innominate. The arteries of the upper extremity appeared to be healthy. In the left thigh, about four inches below Poupart's ligament,

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Nov. 2nd, 1894.

in the line of the femoral artery, a pulsating swelling about the size of a lemon was seen; no thrill could be felt; the swelling was painful and tender; on auscultation a systolic bruit could be heard. Pressure on the artery above stopped the pulsation, and the swelling diminished in size. The pulsation in the popliteals was synchronous and equal. The tibials were not easily felt. There was a good deal of wasting of the right lower extremities. Some hypertrophy of the heart was present, but no bruit. The urine was of sp. gr. 1015; it was acid, and contained no albumen or sugar. On July 28th the patient was removed to another ward, and during the night the aneurysm of the femoral artery became diffuse. He was seized with severe pain in the region of the femoral aneurysm, which greatly increased in size and became very tender. The whole of the left lower extremity became swollen and painful, the pain shooting down to the foot. Morphia was given hypodermically. On the 29th he was lying quite still on his back without any severe pain. There was discoloration of the upper two-thirds of the thigh, obviously due to effused blood. There was no fever. The tongue was furred and the patient was constipated. From the time of the aneurysm becoming diffuse the patient gradually got much worse. The thigh increased in circumference, the skin over the swelling became more discoloured, vesicles appeared over the surface, and it looked as if it might slough. There was some pyrexia, the temperature sometimes reaching 102° F. On Aug. 18th the patient had two or three attacks of hæmorrhage from the bowel. On the 22nd his condition was much worse; the buccal mucous membrane was covered with patches of thrush. He appeared to become worse daily, and he was delirious on the 27th and 28th. All this time he was kept under morphia owing to the severe pain. On the 30th his general condition commenced to improve, and did so until Sept. 9th, when the operation was performed. In the morning of the day of the operation the maximum circumference of the limb was 22½ inches. Pulsation was easily seen on the outer side, but was less marked on the inner aspect. The shape of the swelling was almost globular, the most prominent part looking upwards and inwards. The skin over it was much discoloured, there were a great number of blebs on the surface, and it appeared over the most prominent portion as if it would slough. The limb was a little flexed, and rotated out at the hip and flexed at the knee-joint. There was considerable œdema of the whole limb; the foot was rather cold and very white. No pulsation could be felt in either the tibials or the popliteal of this side. On Sept. 9th the following operation was performed. Ether having been administered, and the parts thoroughly cleansed, Lister's abdominal tourniquet was fixed in position. An incision was made, commencing about the mid-point of Poupart's ligament, and continued over the swelling for about the upper five-sixths of the thigh, the upper part was deepened until the sheath of the common femoral was exposed, and the artery was ligatured in two places about 1 in. from Poupart's ligament and divided between the two ligatures. A transverse incision about 6 in. in length at right angles to the first incision was made over the most prominent part of the swelling in the direction directly inwards. The skin was now dissected off; the sartorius muscle, which extended over the aneurysm, was divided about 2 in. from its origin, and the part corresponding to the swelling removed. The internal saphenous vein, which was thrombosed, was removed for the same extent. The anterior crural nerve was found adherent to the sac at its anterior and outer aspect. This was carefully dissected off. At first an attempt was made to dissect out the sac intact, but this was soon found to be impossible. An opening was therefore made into it, and a mass of clot rapidly turned out. The true sac, with a large rent in it, was soon exposed, and was found to be filled with arterial blood, the coagulum limiting it on the inner side. The artery was now ligatured above and below the sac with silk, and the sac with these portions of the vessel dissected out. All the clot was carefully removed and washed out, and as much of the adventitious sac as could be got away. This was chiefly at the anterior part, the muscles bounding the clot at other parts. The clot weighed 4 lb. The skin incisions were stitched up, and the cavity was lightly packed with gauze and iodoform. The patient stood the operation remarkably well. Nothing was seen of the vein or the profunda artery; the latter was probably given off from the part of the vessel between the aneurysm and the point of ligature of the common femoral. The patient made a good recovery. The wound was dressed every day and freshly packed. There was some suppuration, and a small portion of the skin of the upper and inner flap sloughed. Morphia was given every night until Oct. 1st. On Oct. 17th the skin over the heel was discoloured and a slough formed about the size of half a crown. On Nov. 18th the patient left the infirmary. The wound was nearly healed, as was also the sore on the heel. There was very little œdema of the limb, and he moved the leg with comparative ease. Since leaving the infirmary, nearly twelve months ago, he has practically had no trouble with the limb. The thoracic aneurysm appears *in statu quo*.

CASE 2.—A man sixty-three years of age (kindly sent to me by Mr. Booth of Great Grimsby) was admitted to the Leeds Infirmary on Aug. 14th last, complaining of pain and a swelling in the right popliteal space. About twenty years previously the patient fell some ten feet with the right leg doubled under him. The knee was painful, but it did not prevent his working, and he appeared to get well in a month. Since then he had had some stiffness in that joint and pains at times. Ten weeks previously to admission to the infirmary he was pulling some heavy weights—fish-boxes—along a granite pavement when he fell, experiencing a sudden pain at the back of the right knee. He finished his work with difficulty, but on sitting down the part became still more painful. He could not sleep owing to the pain, but he continued to work for five weeks. A day or two after the injury he noticed a swelling of the leg and ankle and a small hard lump at the back of the knee. He had been six weeks at home, remaining in bed most of the time and entirely confined to bed during the last four days. On admission to the infirmary there was a rounded and somewhat diffuse swelling about the size of half an orange, filling the popliteal space chiefly above the transverse line of flexure. The skin over it was discoloured owing to extravasation of blood. Pulsation could be seen and felt in it; this was synchronous with the pulsation in the left popliteal. Pressure on the femoral arrested pulsation. Below the knee the tactile sensibility was diminished, especially on the outer side of the leg and foot; there was also some œdema of the leg. The circumferential measurements were as follows:—Upper border of patella—right, 17¼ in.; left, 14¼ in. Lower border of patella—right, 14½ in.; left, 13½ in. Three inches above patella—right, 15¼ in.; left, 14¼ in. There was some effusion of fluid into the left knee. On Aug. 25th I performed the following operation. The patient was placed in a prone position with the chest slightly raised. Chloroform having been administered, Petit's tourniquet was applied to the femoral artery. After the parts had been cleansed an incision was made over the whole course of the right popliteal artery. A thick fascia was exposed and the sac soon reached. Lying on this the bifurcation of the sciatic nerve was seen. The two nerves were carefully separated from the sac and protected. The sac was opened, and eight ounces of dark clot were turned out. The popliteal vein was in the wall of the sac on the inner and under aspects. An opening was now seen in the popliteal artery about an inch in length and half the circumference in width. The opening was on a level with the middle of the condyles of the femur. Directly opposite to it was a pyramidal piece of bone, the base of which was attached to the inner and posterior surface of the external condyle of the femur; the rounded apex corresponded to the opening of the artery. This piece of bone was situated beneath the posterior ligament of the joint. The artery was ligatured above and below the aperture, and the part between the ligatures removed. All bleeding points were tied, and as much of the sac as could be was removed. The remainder of the clot was washed out. The wound was now stitched with silkworm gut and a large drainage-tube inserted. The operation lasted one hour. As soon as the tourniquet was removed the circulation of the foot was restored. On Aug. 27th the patient was quite comfortable. The pulse was good and the temperature normal. At 7 P.M. the wound was dressed; it looked well; there was a large quantity of sero-sanguineous discharge. The drainage-tube was removed, and a smaller one inserted. On the 30th the wound was again dressed; there was not much discharge. On Sept. 3rd the stitches and drainage-tube were removed. On Oct. 8th the wound was quite healed, and the patient was up for the first time since the operation. From this date to the

27th he was up every day, and on the latter date left the infirmary. There was some impairment of sensation on the back of the leg. I received a letter from Mr. Booth on Nov. 1st, in which he said: "I have just examined the leg and find the scar quite firm; the movements of the knee-joint are as free as they have been for some years. He can now walk without a stick for a short distance."

Of the etiology of Case 1 I have no very definite ideas; the coats of the artery in the specimen removed looked fairly healthy to the naked eye. In Case 2 the pyramidal piece of bone certainly played an important part; the constant friction must have led to a thinning of the coats, bulging, and finally a rupture. My best thanks are due to Mr. Walter Thompson, the resident surgical officer, for his valuable assistance at the operations, and to those members of the resident staff who attended to the after-treatment of the cases and from whose notes the reports have been taken. For some time I have felt that the plan of treatment employed in the above cases is the most rational and scientific. In February, 1891, I had a case of traumatic aneurysm of the ulnar artery, which I successfully treated by completely dissecting out the sac, after having first tied the vessel above and below. This led me to think of the subject, and the advisability of adopting the same treatment in aneurysms other than those of traumatic origin. An important argument adduced in favour of the Hunterian operation is that the vessel is less likely to be diseased in a part at a distance from than near the aneurysm, and so the chances of secondary hæmorrhage are diminished. But is this the case? I believe that the surgeon cannot predict that because an artery is diseased in one part there will be any less disease in another part. And, even if this is not the case, is secondry hæmorrhage such a common occurrence nowadays as to become a serious factor for our consideration? I have seen many thighs amputated for senile gangrene of the foot and leg in which the vessels were very extensively diseased at the point of ligature, and have never yet seen secondary hæmorrhage following these operations. I believe that non-sterilised ligatures have more to do with such accidents as secondary hæmorrhage than diseased vessels. My contention then is that it is quite as safe to ligature a vessel near the aneurysm as at a part more remote, and if that is correct there will not be much additional risk in dissecting it out and so making a radical cure of it; for sometimes, after the Hunterian operation, the pulsation returns or the aneurysm either bursts or suppurates. The risks of gangrene cannot be greater after the extirpation of the sac, and in the treatment of popliteal aneurysm I think that risk will be diminished, for the anastomotica magna would at once carry a good stream to the leg. I cannot give any definite statistics as to the mortality of the Hunterian operation, nor the percentage number of cases of gangrene, return of pulsation, &c., following it, but every hospital of any size has records of such occurrences. A German named Kubler[1] has collected forty cases of aneurysm treated by extirpation of the sac, and of these thirty-nine were successful. The aneurysm was nontraumatic in eleven cases. The two cases I have recorded are examples of diffuse aneurysm, and these are certainly always the most serious cases. Erichsen says of such: "In many of these cases the only resource left to the surgeon is to amputate the limb." In conclusion, I would urge this method in the treatment of diffuse aneurysms of the arteries of the limbs, and I venture to think it will meet with favour on the part of many surgeons as the best method of treating aneurysms of these arteries before they become diffuse.

Leeds.

NOTES ON RHEUMATISM IN SCARLET FEVER.

WITH AN ANALYSIS OF ONE HUNDRED AND SEVENTEEN CASES.

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IN 3026 cases of scarlet fever at the South-Eastern Fever Hospital rheumatism was recorded as a complication in 117, or 3·88 per cent. In collecting these cases, and in observing a majority of them, that which has seemed most striking has been the close resemblance to ordinary rheumatism and the probability that scarlet fever stands in relation to this disease as a strongly predisposing cause. As to the existence of this intimate clinical resemblance most authorities are agreed, and it seems likely enough that if we were able to take into account all gradations of cases and the "life-history," as Dr. Thomas Barlow has put it, in each form, the analogy would be found to merge into an identity, more or less modified by the special conditions under which each occurs. In other words, the large majority of the cases of arthritis which are seen in scarlet fever would be found to be actually due to acute rheumatism. Thomas[1] says of the rheumatic complication: that it occurs with or without fever and lasts generally only a few days; that it runs the same course as acute rheumatism, but is of less duration; and that it is not always brief, however, or slight, fixing itself in the severe cases particularly on the larger joints, with much inflammation and synovitis, when the pyrexia, sweating, &c., still more closely resemble acute rheumatism. That is to say, the rheumatic phenomena are more marked the more severe the arthritis, and to this may be added, the older the patient. It is also stated in the same article that inflammations of the serous membrane occur generally in connexion with rheumatism of the joints, meningitis and pleurisy being the chief exceptions. Dr. Thomas Barlow,[2] while raising the question whether there may be two forms, arising, respectively, as complication and sequela, says that many cases of each, if not identical, are indistinguishable from acute rheumatism; and in the same place, speaking of rheumatic fever as it occurs in children, he notices that there are less pyrexia and joint affection, little sweating, and more heart affection; also observing that the analogy between the rheumatism of children and that of adults cannot be well seen but by studying the life-history in the former, the various factors being in them often "isolated" or "appreciable at different periods." In order, then, to make an exact comparison between the rheumatism of scarlet fever and ordinary rheumatism it would be necessary to compare them under similar conditions, or under all conditions; and, since this is not at present completely possible, certain allowances should be made for such differences as are obvious. Thus it is important to compare the two forms at similar periods of life, and, bearing in mind the early age at which scarlet fever chiefly occurs, to make comparison carefully with the rheumatism of children, looking at both in the way Dr. Barlow has suggested. Again, it would be manifestly unfair to compare a series of cases of scarlatinal rheumatism with a series of cases of rheumatic fever from the wards of a general hospital without considering that, while in the former all, or practically all, rheumatic cases, of whatever severity, would be included, the latter would contain only such as were sufficiently severe to call for hospital treatment. It is certain that many of the scarlatinal cases, if they did not occur in patients already under observation, would either escape notice altogether or not be deemed of sufficient importance in themselves to be brought under medical care; and it seems more than probable that there occur correspondingly many and slight cases of simple rheumatism which find their way neither into the practitioners' books nor into the hospital records. If a comparison, then, be made between the figures of a scarlatinal and of an ordinary rheumatic series, we might expect to find a relative agreement, but should at the same time be prepared to see higher aggregates of the rheumatic phenomena and complications recorded in the class containing only the more severe, and probably a large majority of adult, cases. Such a relative agreement an analysis of the above-mentioned collection of cases appears to show. The complication under consideration generally arises about the end of the first week of scarlet fever. In 53 cases, or nearly one half, it began on the sixth, seventh, or eighth day. The rest were spread fairly evenly over the first nineteen days, with rather more on the fifth and ninth day, and after an interval of ten days 6 more cases occurred at the end of the fourth week. The fact that in 19 cases the arthritis was present before admission would place the date of onset perhaps a trifle earlier. Clinically, the attacks appeared to be of the same nature at whatever period they occurred. The frequency did not seem to vary much with the time of the year. There were least (2 per cent.) in July and August, and most (5 per cent.) in May and September.

The *pyrexia* was atypical. Since arthritis commonly

[1] Epitome of Brit. Med. Jour., May, 1892

[1] Ziemssen's Encyclopædia of Medicine, article Scarlet Fever.
[2] Brit. Med. Jour., Sept. 15th, 1883.

occurs when the temperature due to scarlet fever is falling, or has fallen, if there is still considerable pyrexia no further rise may take place, or the fever may actually be lower when the pains are complained of. But more frequently there is a definite rise with the onset of the complication, though the attack may be entirely apyrexial if of a mild character.

Hyperpyrexia is an occasional complication of scarlet fever as well as of rheumatism, and in a given case it may be difficult to tell to which it is directly due. However, no definitely rheumatic case occurred in the present series.

The occurrence of *delirium* is important, because during it often no complaint of pain is made, and swelling of the joints may be first noticed; or the patient may, as is not infrequent, only complain when the temperature has begun to fall and consciousness is being regained. Delirium was noted in 8·5 per cent. of the cases, and, indeed, is such a frequent precursor of an arthritic attack, with often such a definite sequence of events, as to lead one actually to expect it in certain cases, or, with a rheumatic history, to be almost certain of its advent. Thus, the patient is delirious on the second or third day, with a temperature of perhaps 104° F., and on the fourth and fifth, instead of improving, gets worse and often appears to be in a critical condition, the throat being only moderately affected, and the rash normal or complicated with sudamina or urticaria, but the temperature 105°, 106°, or even higher—indeed, the patient may die at this stage, but usually by the sixth day the fever has abated a little. With returning consciousness there are complaints of joint pains, often severe in this type of case, but soon relieved by salicylate of soda, and in forty-eight hours the general condition is very markedly improved and the patient out of immediate danger. Again, if the pain is transient or slight, or delirium protracted, or if the case proceeds speedily to a fatal termination, it is possible there may be no complaint of pain at any time, and, without swelling, rheumatism may be overlooked, or its occurrence remain doubtful, especially in rapidly fatal cases with hyperpyrexia or with a heart murmur. The heart and joints should therefore be frequently examined in delirious patients.

Earache is of importance for a like reason, because it is common at the period when rheumatism is apt to arise, and in young children may mask the joint pains, the suffering from it being often much more intense than from the latter.

Arthritis was rather unevenly divided between the two sexes, the numbers being—males 41, females 76. And this inequality was more marked in the older cases, for under the age of thirteen there were 28 males and 34 females, and over that age 13 males and 42 females. In the total number of scarlet fever cases the sexes were about equally represented, and in the older ones the females were only slightly in excess.

In connexion with the liability at various ages I shall first glance at the facts in acute rheumatism. It is rare in infants, and the liability in children, according to Henoch, is greatest from the ages of nine to thirteen. It is most frequent from eleven to thirty[3] or from sixteen to twenty-five.[4] These statements of course refer to first attacks only, while the data in the notes of the present series were insufficient to exclude previous attacks, except in comparatively few instances. Arthritis was recorded in one case at the age of two, and in none younger. The percentage at the ages from nine to thirteen was 5·87, the highest in children. The following were the proportions at the various periods of five years:—

TABLE I.—*Percentage of Arthritis at Various Ages.*

Ages.	Percentage.	Ages.	Percentage.
From 0 to 5 years ...	1·23	From 20 to 25 years ...	14·1
,, 5 ,, 10 ,, ...	2·94	,, 25 ,, 30 ,, ...	34·0
,, 10 ,, 15 ,, ...	5·28	,, 30 ,, 40 ,, ...	19·35
,, 15 ,, 20 ,, ...	7·29	,, 40 ,, 60 ,, ...	0·0

That is to say, the susceptibility for all attacks increased till the age of thirty, diminished rapidly in the next ten years, and after that was apparently very slight. To put it in another way, the complication is much more frequent in the older children and young adults in whom scarlet fever is usually less severe and acute rheumatism is more common. I may here note in passing that in the cases of scarlet fever (17) which have occurred among the staff (young adults) during the three years 1891-94, rheumatism has occurred 7 times, or in a little over 41 per cent.

Profuse sweats are generally absent in the acute rheumatism of children (Henoch), and may not occur in adults (Fagge), while in the latter they are more marked in the severe cases. Profuse sweating, profuse sour sweats, or sudamina, are mentioned in 10 cases of this series, or 8·5 per cent., being in those under ten years 2 per cent., over ten 12 per cent.; but their significance as rheumatic phenomena is diminished when we remember that they are not infrequent in uncomplicated scarlet fever, chiefly, indeed, in the severer cases, being generally absent in the milder, and that they occur most often at about the same time as arthritis is most apt to arise. However, it may be worth mentioning that they were noted chiefly in the older patients (in 1 under ten and 9 older), and that in half the cases the scarlet fever is described as mild.

The order of frequency in which the various joints are affected in acute rheumatism is given by Fagge as follows: knees, shoulders, ankles, wrists, hands, elbows, toes, hips. In the scarlet fever cases the wrists are mentioned 53 times, knees 34, hands 21, shoulders 20, ankles and elbows 17, feet 4 times, and hips not at all, while 12 cases are described as having general rheumatism, or rheumatic fever, and 9 multiple arthritis, or arthritic pain and swelling. It will be observed that the wrists and hands are very frequently attacked, and also that, apart from this frequency, the order is much the same as that given for acute rheumatism. This special susceptibility is not easily accounted for on the hypothesis of acute rheumatism. But perhaps the fact that they are the most exposed, as well as the most freely used joints of a patient already in bed, may have some determining influence; the more so as they seemed especially often involved in those cases arising about the end of the first week, and less prominently so in the earlier cases and those of convalescence, being mentioned in 74 per cent. at the first period (fifth to tenth day), and in only 41 per cent. among the others in the cases in which the special joints were recorded. Also they were mentioned in only one of five cases which occurred after the patient had got up. Swelling of the wrists and hands, too, is of course more easily noticed than in the other joints when no complaint is made; and in some cases it is recorded at first, and no further note of particular joints follows, though others were evidently attacked. And, indeed, in cases in which the arthritis is at all severe other joints are almost sure to become affected. A single joint was attacked in 3 cases only, all very slight; in one a wrist, in another an elbow, and in another a knee. As to the arthritic pains, Thomas[5] has described their nature as "shifting," "so that in a few days every joint may be attacked." And this character was frequently noticed, being more marked in the severer and more protracted cases. It was evidenced in the notes in 22 instances, 18·8 per cent., in 6 under and in 16 over ten years of age. Pain, however, may be absent or uncomplained of in children, even with well-marked swelling, and endocarditis may supervene in such cases, as will be seen in one which will be quoted under chorea. Swelling and effusion may be absent, but were very frequently found, being noted in 42 cases, 39·5 per cent. There was often a patch of erythema, with moist skin, over the inflamed joints, which resembled those of typical acute rheumatism. Urticaria and various forms of erythema were not uncommon in connexion with arthritis, and purpura occurred occasionally. Swelling of the dorsa of the hands and feet was not unfrequently seen, and occurs also in acute rheumatism (Henoch). It seems probably due to effusion into the tendon sheaths, which has been found post mortem by Dr. Moxon in the latter disease.[6] In the time during which this series of cases occurred there was no instance of suppurative arthritis, nor has such complication arisen for three years in about 7000 cases of scarlet fever. In the cases of multiple abscess which have occurred the joints have not been affected. Thomas[7] says of suppuration that it is rare and generally insidious, but may be acute and intense from the first; that it seems to affect, primarily at least, a single joint, though others may be secondarily attacked; that it is generally pyæmic, but may be the result of scrofulous or other allied diathesis. Hayward[8] says: "That variety of pyæmia associated with gonorrhœa and scarlet fever tends especially to affect the joints, and these are often the only parts invaded; but this joint inflammation is very different from that which occurs in the course of other cases of pyæmia, for the effusion is generally slight and does not become purulent."

(To be continued.)

[3] Fagge's Principles and Practice of Medicine, vol. ii., p. 688.
[4] Dr. Mitchell Bruce, in Quain's Dictionary of Medicine, article Acute Rheumatism.
[5] Loc. cit.
[6] Fagge's Principles and Practice of Medicine, vol. ii., p. 688.
[7] Loc. cit.
[8] Quain's Dictionary of Medicine, article Pyæmia.

A SUCCESSFUL CASE OF LAPAROTOMY FOR PERFORATING GASTRIC ULCER WITH SUBPHRENIC PNEUMOTHORAX.

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AND
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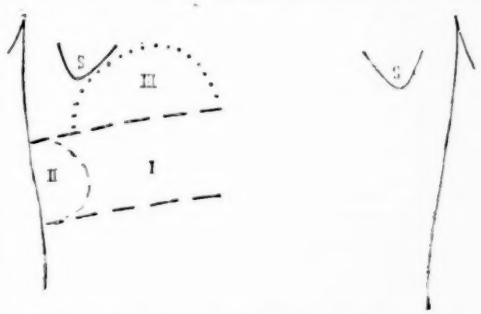
RECOVERY after laparotomy for the relief of perforating gastric ulcer with subphrenic pneumothorax has rarely been recorded. The following case, the notes of which are condensed from those taken by Mr. F. Morley and Mr. Jeffery, recently Dr. Ewart's clinical clerks, is therefore of interest.

A young woman aged twenty-five years was admitted into St. George's Hospital under the care of Dr. Ewart on Nov. 18th, 1893. She had had no serious illness before, and the family history was good. The catamenia were natural, and the bowels had been regular daily until Nov. 17th, since which date there had been no relief. On admission she complained of left thoracic pain extending to the hypochondrium and epigastrium, and stated that her present illness began eight months previously, when frequent attacks of pain in the epigastrium, especially after food, commenced. These attacks usually lasted for two or three days, when vomiting brought relief, the interval between the attacks being generally several weeks. There had never been any hæmatemesis. On Nov. 12th, after dinner, the patient felt in the epigastrium a very severe pain, which subsided in about three hours; but in the night a very sharp sudden pain was felt in the left side of the chest, with some difficulty of breathing and acute discomfort on deep inspiration. On the following day she was unable to leave her bed, and the thoracic pain continued up to the time of her admission. There were neither rigors nor vomiting. The patient was clearly very ill; her face had a characteristic "abdominal" expression; the pulse was 108 and feeble, the respiration 40 and catchy, the temperature 100° to 101°F., and the tongue clammy and flat. The abdomen was tympanitic, tender and tumid in the epigastric region, where it yielded a bell note. There was a normal amount of abdominal respiration. Undue resonance rose behind the sternum as far as the upper level of the fourth cartilages, extending between the two nipples for a distance of six inches and a half. The hepatic dulness could not be obtained further to the left than the right nipple line, beyond which the epigastrium was tympanitic. The heart's apex could be felt in the fourth left interspace, three inches from the mid-sternal line. Posteriorly a tender zone (about three inches wide) of tympanitic resonance with a bell note extended along the left pulmonary base between the ninth and twelfth ribs. Immediately above this a somewhat dull patch rose into the inter-scapular space as far as the level of the sixth dorsal spine. Over this patch the auscultatory signs were harsh tubular breathing, loud ægophony, and absence of vesicular murmur. Above, there was good vesicular breathing; but the tubular breathing extended forward to the third rib, and a tympanitic percussion note was conducted along the axillary base, which was, however, less resonant than the posterior base.

The diagnosis of subphrenic pneumothorax being no longer doubtful, the patient was recommended to submit to immediate operation, but she declined surgical interference. On Nov. 19th the condition was practically unchanged, the temperature being 100°, the pulse 112, and the respiration 36. The lower part of the abdominal wall was flaccid. There was no drawing up of the knees, and abdominal respiration was still present, but somewhat diminished. On the 20th, no change having occurred, Mr. Bennett met Dr. Ewart in consultation, and, the patient's objections having been overcome, immediate operation was decided upon. Ether having been administered, Mr. Bennett cut down through the middle line immediately below the ensiform appendix, the wound being about four inches in length. Upon opening the peritoneum a circumscribed cavity was entered, from which came a quantity of gas and a little slightly opaque, rather offensive, sour-smelling fluid. The cavity was bounded below by the upper surface of the liver and to the right by the suspensory ligament; on the left it passed towards the stomach, which, matted by adhesions, formed the limit in that direction. No attempt was made to search for an opening in the stomach, as the parts were so matted together. The cavity was washed out with warm water, and a large glass drainage-tube was inserted. The operation was well borne, although there was necessarily rather severe collapse, from which, however, the patient soon rallied.

The progress of the case was steady; the pulse and respiration varied but little; the evening temperature rose immediately after the operation to 101°, and on the 21st to 101·8°. On the 23rd the temperature fell to 99°, which it did not again exceed. On this date there was some sternal pain just above the wound, otherwise no discomfort occurred directly connected with the operation. Little discharge came from the tube until the 25th, when a copious flow of offensive fluid commenced, evidently from a gastric perforation. The pulse soon dropped to 96, the respiration to 30, and the aspect rapidly improved, all the "abdominal look" disappearing. By the end of a week after this date the fluid was much less in quantity and semi-purulent. The cochineal test gave no result, nor was there any other evidence of persistence of the leak. From the first the patient had been entirely restricted to rectal alimentation. (The tube was on two occasions changed for a shorter and smaller one, but the drainage was continued until the cavity appeared to be completely obliterated, which was not until Jan. 6th, 1894.)

On Dec. 2nd (1893) the patient, who had been steadily improving, complained of pain in the left flank. The possibility of empyema was considered by Dr. Ewart and Mr. Bennett in consultation, and absolute dulness with ægophony



Tracing (reduced to one-sixth) of the areas of resonance and of dulness found by percussion. S, inferior angle of scapula; I, posterior basic zone of tympanitic resonance; II, axillary basic area of imperfect resonance, with tympanitic quality; III, dull area, giving tubular respiration and loud ægophony.

being recognised at the left axillary and posterior bases, with tubular breathing above, aspiration was made under ether. Fifteen ounces and a half of clear fluid were thus removed, after some difficulty in finding it, in consequence of the depth at which it lay from the surface, a thickness of not less than four inches and a half of tissue having to be perforated before the fluid was discovered. Disappearance of the tubular breathing followed immediately. On Dec. 11th the discharge from the abdominal wound was much less thick and offensive. Soon after this the patient began to sit up in bed. By Dec. 23th barely an ounce of odourless pus represented the discharge from the wound. The tube was, as already stated, finally removed on Jan. 6th, 1894, and the patient was discharged "recovered" on the 23rd, the lung symptoms having entirely cleared up without any recurrence of the previous gastric pain.

Remarks by Dr. EWART.—The case presents several practical points of clinical interest, some of which I have dwelt upon elsewhere.[1] 1. Although the evidence derived from the physical signs was conclusive as to the genuineness of the abdominal lesion, the abdominal symptoms were of a relatively mild type; the pain was not excessive; the abdomen was not tumid except in the epigastric region; the knees were not drawn up. 2. Attention has been called elsewhere[2]

[1] The Clinical Journal, July 25th, 1894: Cardiac and Hepatic Percussion in the Diagnosis between Pneumothorax, Subphrenic Pneumothorax, and Gastric Gaseous Distension.

[2] Loc. cit.

to the persistence of abdominal breathing in cases where this symptom has been looked for. This is a fact of some value in connexion with diagnosis. 3. The case presented in a marked degree the physical signs of subphrenic pneumothorax recently described by me.[3] The diagram is a reduction (one-sixth) of the tracing taken from the patient's back, after mapping out the outlines of the areas obtained by percussion. The clearness with which the belt of posterior tympanitic resonance was made out in this case is in keeping with the fact that little fluid was found when the limited gaseous collection was opened, and that practically no discharge escaped in any quantity through the drainage-tube until the fifth day. This circumstance is the more remarkable since the perforation must have taken place when the urgent symptoms set in—after the patient had dined. It almost warrants the conclusion that the ulcer must have been situated in the upper part of the stomach. The diagnostic value of the sign in question need not be here discussed again. In this instance it was hardly required, as it is in more doubtful cases, as a means of establishing the nature of the trouble; nevertheless, it is of practical importance as a confirmation of the results of the physical examination usually practised, and should be looked for in all cases, when practicable, with due precautions. 4. Lastly, the tympanitic heart's resonance, also previously described,[4] was exemplified in a typical degree. At my request Mr. Bennett, on opening the gaseous collection, felt for the lower surface of the central tendon of the diaphragm and found that it was not displaced upwards to any perceptible extent. This observation suggests that, at least in this case, the tympanitic heart note was yielded by the heart itself and not by an accumulation of gas in front of it, and was conducted by the heart's substance, as by a plexímeter, from the gas pent up beneath the diaphragm and at the posterior base of the thorax.

Remarks by Mr. BENNETT.—This is the only case of subphrenic pneumothorax the result of perforating gastric ulcer which I have till now been called upon to treat, and I am unacquainted with any recorded instance in this country, up to the present time,[5] of successful surgical treatment under the conditions related. The cases hitherto recorded in which the patient has survived the operation sufficiently long have, I think, terminated fatally from thoracic or pulmonary complication, and the success in the present instance was undoubtedly altogether due to the early detection and withdrawal of the fluid from the chest. The case is of peculiar interest inasmuch as it clearly demonstrates that the fluid which collects above the diaphragm in many of these instances is at first not necessarily purulent, although in the fatal cases suppuration has, I believe, taken place either in the pleura or the lung. The extreme depth at which the fluid was found is worth noting, and may possibly explain the failure to reach it in some cases. In making the abdominal incision I chose the middle line for the reason mentioned in the report of a case of successful immediate suture after ruptured gastric ulcer, which I recently published in THE LANCET.[6] The circumscribed space laid open was, I presume, only an extension of the main cavity immediately connected with the perforation, which lay altogether posteriorly. The adhesions matting the stomach to the surrounding parts were so dense and extensive that it was quite evident that effectual search for the actual perforation could only be carried out with much roughness and possible injury to other parts; in addition to which the general peritoneum, shut off from the foul cavity by these adhesions, must necessarily have been opened up, a proceeding I did not think desirable as no evidence of any general peritoneal implication existed. I, therefore, determined to treat the abdominal lesion as an ordinary abscess, without any attempt at closing or even exposing the gastric perforation. The issue of the case fully justified my action, and shows that a perforation of the stomach will in these subacute cases, when it communicates with a well-circumscribed cavity, heal spontaneously if the cavity into which it opens is drained upon the principles applied in the treatment of ordinary abscess—a fact of some importance, which should be borne in mind, especially in dealing with cases in which the long and exhausting proceedings necessary for the exposure and suturing of a gastric perforation are unduly perilous in consequence of the gravity of the general condition of the patient.

[3] Loc. cit. [4] Loc. cit.
[5] Oct. 7th, 1894.
[6] THE LANCET, July 7th, 1894.

THE MECHANISM OF DEATH UNDER CHLOROFORM.[1]

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THE present theories as to the mechanism of death under chloroform are based upon two classes of evidence—viz., the results of experiments performed upon animals and a comparatively small number of observations of fatal cases occurring in man. From the knowledge thus obtained have arisen the following two more or less opposing views as to the mode in which the fatal result is brought about: 1. That death under chloroform is invariably caused by gradual failure of the respiration—i.e., by primary respiratory paralysis, and never by primary failure of the circulation. 2. That death may occur either by primary paralysis of the circulation or by primary respiratory paralysis. The evidence of the most extensive series of experiments on animals is more in favour of the first theory as to the cause of death, and is in distinct conflict with much of the evidence afforded by the majority of the fatal cases occurring in man, at least in this country. So far, experiments on animals have failed to give results which satisfactorily explain the mode of death under chloroform in the human subject. In considering the action of drugs in general, and of chloroform in particular, it seems that those who base their opinions entirely upon experiments on animals fail to appreciate to the full the artificial conditions under which the experiments are of necessity conducted, and do not sufficiently allow for the differences which must exist between the lower animals and the human subject. Into these differences it is not necessary to enter in detail. It may, however, be inferred that since different individuals vary enormously in their tolerance of drugs, and especially drugs of the alcohol class, the variation between them and animals, which have nothing in common with human beings except the fundamental vital organs, must be still greater. There is another and almost unworked line of investigation which is not open to the objections of experiments on the former. It consists in comparing the symptoms of death under chloroform as seen in the human subject with similar symptoms produced by accident or disease—symptoms the mechanism and clinical significance of which are beyond all doubt. From comparison and consideration of a few cases it seems clear that chloroform may cause death in at least two ways: 1. By gradual primary respiratory paralysis, in which case the fatal termination is very gradual, warning is given of the impending result, and with treatment the chances of recovery are good. These form the majority of the cases of chloroform accidents which end in recovery. 2. Death may occur from primary failure of the circulation. In these cases the onset is sudden, the pulse gives the first warning of danger, respiratory movements continue after the pulse is imperceptible, and a fatal termination is the rule. The majority of fatal chloroform accidents no doubt belong to this class. The reasons for this conclusion are based upon the evidence of the following cases. In the first case I was merely a spectator.

CASE 1.—The patient was a strong, well-made man aged about thirty years, suffering from sarcoma of the side of the neck. Chloroform was administered in the usual way on a piece of lint. In the course of the administration the patient struggled violently, and was with difficulty held on the operating table. In the course of his struggles he got into the sitting posture. His breathing was during the struggling of necessity very irregular—that is to say, deep inspirations were followed by "holding the breath." While in the sitting position he suddenly fell back and ceased struggling. The lint was at once removed. He was then in the following condition. The face was suffused, of a dusky red colour, the eyelids were wide open, the pupils were dilated, and the conjunctivæ insensitive; there were slight irregular muscular twitchings of the arms and fingers; the respiration was deep, full, and stertorous, air passing freely into and out of the lungs. I instinctively stretched out my hand to feel his radial pulse, but could not find it; the chloroformist, who was standing on the other side, also could not feel it. The

[1] A paper read before the Society of Anæsthetists.

patient was still breathing deeply, but in an unnatural manner, and except for the absence of the pulse there seemed no cause for alarm, and with active respiration there seemed no cause for interference. The head was kept low and the jaw pulled forwards. After several deep inspirations the respiratory movements suddenly ceased—they did not shade off gradually, but simply stopped abruptly. Artificial respiration and all the usual restoratives were employed at once, but without success.

The notable point in this case is the fact that the symptoms immediately preceding dissolution differed very slightly from those commonly seen in patients who have struggled during the administration of chloroform. It is almost the rule for male hospital patients to struggle more or less violently, for the pupils to be dilated, and then, in the last stage, for the catchy breathing to be replaced by free deep inspirations. The danger signals were the suddenness with which the patient became quiet and the absence of the radial pulse. The respiration gave no warning of danger, as appears to be indicated from the statement that death is caused only by respiratory failure. It may be suggested that when the patient fell backwards, and the lint was removed, he had an amount of chloroform vapour in his lungs which, added to that already in his system, was sufficient to cause respiratory paralysis. Against this view it must be remembered, first, that when the lint was removed, whatever the amount of chloroform vapour in the lungs, the circulation was too feeble to absorb and convey a fatal dose to the respiratory centre; secondly, that with so feeble a circulation the deep respirations would rapidly drive out the chloroform vapour before it could be absorbed and conveyed to the respiratory centre; and, thirdly, that in no sense were the symptoms those of gradual respiratory paralysis.

CASE 2.—This patient, an elderly woman, was under my care for scirrhus of the breast, atheromatous arteries, and granular kidneys. With the exception that there was practically no struggling the case resembles the first one. The patient was wheeled into the theatre on a couch and lifted on to the operating table. The chloroform was administered as usual on lint—i.e., the dry lint was first placed over the face and a few drops of chloroform were put on it to begin with, more being added as the patient became used to it. The breathing was quiet and regular, and the pulse (taken at the temporal artery) rather small and feeble, but not remarkably so. There was no struggling or holding of the breath; after a few minutes the patient became rather rigid; then, as the muscles were becoming gradually relaxed, I could not feel the pulse and the patient suddenly began to breathe more deeply, though up to this time the respirations had been quiet. I removed the lint the moment the pulse ceased to beat and before any deep inhalations of chloroform were taken, and examined the pupils; they were dilated, a normal condition at this stage. Now it is very easy to miss for a second a rather feeble temporal pulse, especially if there is contraction of the jaw muscles, and, as the respiration was still free and deep, this of itself, though it made me a little uneasy, did not actually alarm me. There was, however, a peculiar quality about the respiration which I did not like; it seemed to express an extreme desire to get air. This, combined with the dilatation of the pupils, made me discontinue the administration of the chloroform and move to the side of the patient to await further developments. The impression on my mind was that as long as she breathed freely there could be no danger. She took from four to six deep inspirations and then suddenly ceased to breathe. The instant that the breathing ceased I began artificial respiration. There was not a moment lost and everything was tried, but without avail. At the necropsy it was found that both coronary arteries were atheromatous, one being completely occluded, so that the heart at the best was but imperfectly supplied with blood.

The salient features of this case were the absence of struggling and irregular respiration, and the existence of quiet breathing combined with a rather small but steady pulse, both of which are antagonistic to the absorption of chloroform in excess. The first sign of danger was not the gradual decrease in respiratory movements; but, on the contrary, sudden marked feebleness of the pulse, coincident with exaggerated respiratory movements, the breathing continuing after the pulse had become imperceptible, and ceasing suddenly. I had been warned that the patient was not in good condition; I was watching her carefully, and there could be no doubt that the pulse failed first, and immediately afterwards the respirations became deeper. What, then, was the mechanism of death in these two cases? I hold strongly that in both there was primary failure of the circulation, and that the failure of the respiration was a secondary consequence, caused by anæmia of the respiratory centre. In neither case was there gradual or sudden paralysis of the respiratory centre as the primary effect. These are my reasons. In gradual respiratory paralysis caused by some toxic agent, such as opium or chloral, we find, not exaggerated respiratory efforts, but a slowing of the respirations until they ultimately become extinct. Dissolution would certainly not be ushered in by exaggerated respirations, as it was in these two cases. On the other hand, a sudden and absolute paralysis of the respiratory centre—an annihilation of the centre—as complete as can be achieved by operation in the physiological laboratory causes instantaneous and complete cessation of all coördinate respiratory efforts. The symptoms agree with neither of these conditions, but they do agree exactly with what one would expect to be produced, and what is actually produced, when the respiratory centre is suddenly deprived of blood from any cause. Arguing on *a priori* grounds it might be expected that any sudden feebleness of the heart or paralysis of the vaso-motor centre, when not compensated, would cause anæmia of the respiratory centre, to be followed by exaggerated respiratory efforts, such as occur in sudden death from profuse hæmorrhage. I will illustrate this by the following three cases out of several I have seen, in all of which the cause and mechanism of death were beyond dispute, and in all of which the symptoms were identical with those presented in the above-mentioned cases.

CASE 3.—This case, which terminated fatally, I witnessed under the following circumstances. I was in a medical ward and noticed an apparently healthy man who was sitting in bed reading a newspaper. While I was actually watching him he suddenly became deadly pale, fell back, and began to breathe deeply. I immediately went to his assistance, and found his pupils widely dilated; he was pulseless and making deep respiratory efforts; these exaggerated inspirations passed rapidly into a general convulsion, and the man was dead. The inspirations were at first of the same type as in Case 2. The cause of death was rupture of an aortic aneurysm into the pericardium. Death began from the heart, and the symptoms were produced by rapid depletion of the respiratory centre of blood.

CASE 4.—This is an example of sudden cardiac failure coming on in the course of an attack of pericarditis. The patient was a girl sixteen years of age who had been ill for some time, but was going on well. While sitting up in bed, contrary to orders, she suddenly fell back insensible. I saw her almost immediately. There was then no pulse perceptible at the wrist, she was making deep respiratory efforts, and air was entering the chest freely; the pupils were dilated. Death rapidly ensued. The respiratory efforts continued until the end. In this and the preceding case the character of the respirations was the same, and expressed an intense desire for air.

CASE 5.—The patient, a lad aged about fourteen years, was suffering from traumatic peritonitis. An exploratory incision had been made in the abdomen. He had been back in bed some hours after the operation, and was apparently going on well—that is, his pulse was good and he seemed comfortable. Suddenly he began to gasp for breath and put his hands to his throat; his pulse failed rapidly, but the respiratory efforts continued some seconds after the pulse was imperceptible. The gasping for breath was so marked that the nurses thought he had been choked by something accidentally swallowed. In this case I consider there was sudden failure of the circulation secondary to the peritonitis, with consequent anæmia of the respiratory centre.

In Case 3 death was caused primarily by failure of the circulation from hæmorrhage; in Cases 4 and 5 the symptoms were the same, but the cause was cardiac paralysis. The symptoms coincide exactly with those exhibited in the two fatal chloroform cases, and seem to suggest that in these the sequence of events was as follows. In the man the inhalation of a large dose of chloroform produced sudden failure of the circulation and consequent depletion of the respiratory centre of blood. This stimulated the respiratory centre and originated the exaggerated respiratory efforts, which continued, increasing in violence until the centre was exhausted, death ensuing without anæmic convulsions because the general system was under the influence of the anæsthetic. In the case of the girl there was the normal gradual fall in blood pressure caused by the

inhalation of the chloroform; this quickly reached a point at which the heart, supplied by only one coronary artery, which was atheromatous, did not get enough blood to support it, and consequently it rapidly failed. Anæmia of the respiratory centre followed, as evidenced by the usual symptoms. In this case the heart did not recover itself, and death was the result. Whatever other explanations may be advanced as to the cause of death in these cases, one fact remains—viz., that the mere persistence of respiration is not invariably a sign that all is well with the patient. In dealing with severe and desperate operation cases I have come to consider a feeble pulse by itself not the most serious sign; but if the pulse suddenly becomes quicker—a running pulse—and is associated with deep gasping respirations, movements of the alæ nasi, and dilated pupils, then it is a sign of serious failure of the circulation and impending dissolution. To speak of watching the respiration in the sense of merely seeing that it goes on is to give very imperfect directions for truly estimating the condition of a patient under an anæsthetic. In the following case the symptoms, failure of the pulse and deep inspirations, were identical with those already described; but in this instance they were produced by failure of the circulation as the result of injury inflicted upon a patient when in a semi-anæsthetic condition.

CASE 6.—The patient, a girl fifteen years of age, was operated on for genu valgum by Macewen's method. Chloroform was given on lint; she took it well, the operation was performed, and the splint in process of being put on. At this stage, under the impression that all painful operative procedures were completed, the anæsthetic was discontinued. The patient was then breathing quietly; she had a good pulse and normal colour; the pupils were slightly contracted, and the corneal reflex was present—in fact, she was coming out of the anæsthetic, but was sufficiently insensible to bear ordinary manipulations or even incisions without feeling pain, and was as well as anyone could wish her to be. At this instant the surgeon suddenly forcibly flexed the left knee, which was stiff owing to osteotomy having been performed on that side a few weeks previously. The adhesions gave way easily with a crunching sound, and the patient uttered a scarcely articulate cry, immediately became deadly pale, and began to breathe deeply. She passed at once into the following condition. The head was turned to one side, the face was deadly pale, the eyes were slightly open, the pupils were widely dilated, and she was taking deep inspirations, the air passing freely into the chest; the muscles of the alæ nasi were also acting, and the pulse was imperceptible at the wrist. The symptoms conveyed the impression that she had fainted. To drop the head, elevate the limbs, and apply hot sponges &c. were the work of a moment. She continued to make strong respiratory efforts, and air was freely entering the lungs, but there was still no sign of the radial pulse. It appeared at first that the patient would probably recover—it seemed impossible that she could die with such active respiration; but the breathing, without shading off in the least, suddenly ceased, and every effort to restore life failed. I do not think there is anything to be said as to the cause of death in this case; it explains itself. It is a clear instance of syncope from reflex inhibition of the heart, and as such contradicts the finding of the Hyderabad Chloroform Commission. I am not prepared to say how far the fact that the patient was under chloroform contributed to the shock or whether a similar result would have happened if no anæsthetic had been used. It is well known how frequently persons of all ages suffer most serious injuries without dying so quickly as did this patient. Some blame may therefore reasonably be laid upon the semi-anæsthetic condition of the patient at the time.

In the light of the finding of the Hyderabad Chloroform Commission—which reported that "every [painful] operation which ingenuity could suggest, or that has ever been supposed to be dangerous under chloroform, was performed in every state of chloroformisation without effect upon the heart, the pulse, or the blood pressure"—one is forced to the conclusion that there exists a difference between the nervous organisation of animals and human beings so great that it is unwise to apply *in toto* the results of these experiments to the case of the latter. If it is admitted that in this last instance the experiments were at fault, either from some inherent quality in the animals experimented upon or from the comparatively small number of the experiments, it is only reasonable to receive with caution other theories based solely upon experiments upon animals, such as "that death from chloroform in every instance results from failure of the respiratory function and never from syncope or failure of the heart's action."

Oxford-road, Manchester.

DIPHTHERIA TREATED BY ANTITOXIN.

BY SURGEON-CAPTAIN J. M. REID, A.M.S.

THE patient, a girl eleven years of age, came under my care on Oct. 21st, 1894. The tonsils and most of the uvula were covered with membrane. There were tenderness and swelling of the glands of the neck; constitutional disturbance was slight. The temperature was 99·4° F. She had had sore-throat for three or four days. A piece of the membrane was preserved for diagnostic purposes.—Oct. 22nd, 11 A.M.: The patient is in the same condition, but the membrane is spreading; almost all the uvula is encased, and the membrane is extending round the soft palate. The urine is slightly albuminous, and the voice a trifle husky. 3.15 P.M.: A little over nineteen and a half cubic centimetres of Ruffer's antitoxin (plasma) were injected into the loose subcutaneous tissue of the right flank. Beyond the initial prick of the needle no uneasiness was felt. 6 P.M.: The patient was found reading a book in bed and feeling very well; slight tenderness at the site of injection; temperature normal. The throat was not examined.—23rd, 11 A.M.: The patient looks very well. She says she feels much better in every way. The uvula is quite clear from membrane except a little attached to each side of the base; the tonsils are clear except in the centre; all the throat is extremely moist and has a very glistening aspect. The temperature is normal. 7 P.M.: The temperature is normal; the patient feels very well. She slept for two hours during the afternoon, when she perspired very profusely and had a very flushed face (so much so as to make the mother feel uneasy). The throat is still clearing.—24th, 11 A.M.: The membrane has disappeared except at the juncture of the uvula and soft palate and a small transparent bar running a little way across each tonsil.—25th, 6 P.M.: The temperature is normal. All membrane is gone except a small bit on each side of the base of the uvula and on the centre of each tonsil. There is a ring of superficial ulceration near the base of the uvula.—26th: The temperature is 98°; the membrane is gone, except a small speck on each side of the base of the uvula.—27th: There is a faint indication of transparent membrane on each side of the base of the uvula.—28th: The uvula is absolutely clear. Child feels quite well.

Remarks.—Cultivations were made from the membrane and pure colonies of the diphtheria bacillus obtained. The bacilli were mixed up, as is always the case, with great numbers of cocci. The antitoxin used was Ruffer's (plasma), prepared at the British Institute of Preventive Medicine by Dr. Armand Ruffer, and obtained by me from Professor Wright. The following points are worthy of note: 1. The safety with which the antitoxin can be used; no constitutional disturbance arose in this case (unless the profuse perspiration on the afternoon of the day following the injection can be considered as such), and 20 c.c are a considerable amount. 2. The rapidity of the melting away of the membrane, virtually within twenty-four hours. 3. The general feeling of well-being induced in the patient. 4. The doing away with the necessity for local treatment, always troublesome, often harmful, and a frequent source of infection. (I may mention here that from the time of injection nothing whatever was used in the way of gargle or anything else.) 5. Rapidity of cure means curtailment of time before disinfection of the house, &c., can be carried out—a point of considerable importance in dealing with a disease like diphtheria. It is hardly necessary perhaps to say (especially as the loose cellular tissue is selected as the best site for injection) that the syringe and needle as well as the skin should be perfectly clean and aseptic, otherwise disaster may follow, not from the presence of the antitoxin, but from germs introduced from septic instruments, and discredit be erroneously thrown upon this method of treatment. I had the syringe and needle boiled immediately before use.

Netley.

THE TREATMENT OF IMPACTED EXTRA-CAPSULAR FRACTURE OF THE NECK OF THE FEMUR.

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SURGEON TO THE MANCHESTER ROYAL INFIRMARY; LECTURER ON OPERATIVE SURGERY, OWENS COLLEGE.

THE treatment usually adopted in cases of impacted extra-capsular fracture of the neck of the femur consists in simply keeping the leg at rest, without making any attempt to overcome the characteristic deformity — viz., the shortening and eversion of the limb, always present in a greater or less degree. As might be expected, the result in most cases is very unsatisfactory, for the leg remains permanently more or less shortened and everted. Erichsen[1] says: "In consequence of the impaction the limb cannot be restored by traction to its proper length, and hence incurable lameness always results from this injury. ..... Nothing can be done to diminish the deformity. ..... The patient remains throughout life more or less crippled." During the past two years three instances illustrating the serious after-effects of this injury have come under my notice, the limb being left in the condition just described. With a view to preventing, if possible, this result in a case recently under my care in the Manchester Royal Infirmary, the impaction was at once broken down under anæsthesia, and, the eversion and shortening by this means having been overcome, the fracture was then treated in the ordinary way, extension being maintained by means of a weight attached to the leg, a long straight splint being applied to the outside of the limb. The consequence was that the fracture readily united with the limb in the corrected position, no deformity remaining.

The following are the details of the case. The patient, a male aged twenty-seven years, was admitted to hospital on July 2nd, 1894, suffering from the effects of a fall on the right hip a few hours previously, and presenting all the signs of an impacted extra-capsular fracture of the neck of the femur. There was well-marked eversion of the limb, which was shortened to the extent of nearly an inch. The trochanter was less prominent than its fellow, but increased in breadth in an antero-posterior direction. No crepitus could be detected; the limb could not be restored by traction to its normal length, and attempts to overcome the eversion caused great pain and proved unsuccessful. On making steady traction upon the limb, without using any great amount of force, after the patient had been anæsthetised, the impaction was felt to give way with a distinct grating sensation, and it was then found that the eversion could be easily overcome and the limb restored to its normal length. Extension was at once applied in the ordinary way by means of a weight, commencing with 9 lb. and gradually increasing to 22 lb., any tendency to eversion being prevented by a Liston's splint on the outside of the limb. On July 31st the extension apparatus and splint were removed, and the limb was put up in a plaster-of-Paris bandage. On Aug. 3rd the patient left the hospital. On Sept. 10th the plaster bandage was taken off at home, and two days subsequently the patient came on crutches to the ward to show himself. On examining the leg, upon which he was able to bear his weight, it was found to be of the same length as the other. The movements of the hip joint were quite free, and he could flex the thigh to a right angle. There was no eversion of the limb, the patient being able to rotate the leg inwards and rest the sole of the foot upon the dorsum of its fellow. There was considerable thickening about the great trochanter owing to the presence of an abundant formation of callus. On Oct. 22nd the patient had given up the use of his crutches and walked without any lameness. The thickening about the trochanter had quite disappeared, and, except that the hip was slightly flattened as compared with the opposite side, it was difficult to detect any traces of the injury.

I am aware that the plan of treatment carried out in this case is somewhat unorthodox, and quite at variance with the teaching of the different text-books on surgery, as there is a traditional dread of union not taking place in this variety of fracture if the fragments are separated by breaking down the impaction. In Holmes's "System of Surgery"[2] it is stated that "in impacted fractures of the cervix forcible extension of the limb, with the view of restoring it to the same length as the other, must not be attempted, or the fragments may be unlocked, and thus placed in a less favourable condition for union." The satisfactory result obtained in the case described above, by breaking down the impaction to a sufficient extent to allow of the deformity being corrected, would, however, lead me to again adopt this treatment under similar circumstances, provided that the patient was of good constitution and not advanced in years.

Manchester.

[1] Science and Art of Surgery. Ninth edition, vol. i., pp. 610, 619.

[2] Third edition, vol. i., p. 1010.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A THERAPEUTIC NOTE.

BY TOM ROBINSON, M D. ST. AND.

A GREAT number of patients who seek medical advice present the following picture. They suffer from cold feet, physical and mental depression, exhausted headaches, achings of the nerve centres, indolence of the digestive, menstrual, and other functions, intolerance of physical exercise, and a subnormal temperature. It would be an easy task to add to this group of symptoms, but sufficient is given to enable us to recognise the cases. The medical man is often puzzled as to the best means of building up the organism and of increasing the heat of the blood. He recommends exercise in the open air, early hours, simple nutritious food, and prescribes tonics and cod-liver oil; but he frequently meets with considerable difficulty in getting his patients to take his remedies. Patients say that the oil makes them sick and the tonics irritate their stomachs. To overcome this difficulty, and to find a combination which would fulfil the indications for treatment, I asked a well-known firm of pharmaceutical chemists to pancreatise some cod-liver oil, and to suggest a mixture which would be palatable and one which would not undergo changes. Being anxious to give malt extract with the oil, the following formula was suggested: Extract of malt, an ounce and a half; pancreatised cod-liver oil, one ounce; spirit of chloroform, one drachm; oil of cinnamon, six minims; water to six ounces. A tablespoonful to be taken three times a day after meals. This mixture is given as a food, and if persevered with I believe will be found to be easily assimilated and to constitute a treatment of signal service. It is astonishing to meet with so much domestic drugging amongst the laity. Men and women carry about such potential drugs as phenacetin and antipyrin with as much unconcern as our forefathers did peppermint drops, and they dose themselves at the approach of every pain. They are also large consumers of the several mixtures, &c., which are before the public. So far as the medical profession is concerned the remedy is an easy one. If we absolutely refused to order any mixture the composition of which was not known we should occupy a strong position, as our ordering secret remedies gives countenance to their introduction. As to the two drugs mentioned—namely, phenacetin and antipyrin—surely they ought to be deemed as poisons within the Pharmaceutical Act, and not articles which can be bought as easily as soap or sugar.

Prince's-street, Cavendish-square, W.

CASE OF COCAINE POISONING.

BY E. N. NASON, M.B. CANTAB.

A TRAINED NURSE twenty-nine years old, in order to test a solution of hydrochlorate of cocaine which was supposed to have lost its strength, injected into her arm twenty minims,

which contained five grains of the alkaloid. Almost immediately afterwards she began to feel cold, but not knowing that cocaine had any but a local anæsthetic effect she did not attribute this to the injection. This was about 2.30 P.M. Half an hour later, it being her bedtime, as she was on night duty, she went to bed, remarking that as she felt cold she would have a hot bath before retiring. She remembers trying to get to the bath room and feeling that the effort to do so was very great, and that she had considerable difficulty in breathing. After this she remembers nothing more until next day. Some little time later—possibly twenty minutes—she was found lying upon the floor in the passage leading to the bath room. She was then only partially conscious. Her extremities were cold and her pulse feeble. There was no marked pallor, no sweating, and no sickness. The respiration was very shallow and jerky. Her eyes, the pupils of which were much dilated, had a fixed and absolutely vacant stare. On being conveyed to bed her extremities soon became warm and her pulse nearly normal, but she could not be made to lie down and persistently assumed a position in which she rested on her left elbow and stared fixedly at the wall or ceiling without appearing to see anything. An attempt was made when she was first found to get her to swallow some stimulant, but this she seemed quite unable to do. She remained in this dazed and vacant condition, occasionally saying "it is cold," but unable to answer any questions except by "yes" or "no," which were evidently used at random and always after a long interval, until 1 A.M., when she fell asleep. She slept for a few hours, and then woke up feeling very sick, giddy, and weak, but with no recollection whatever of what had taken place after her attempt to reach the bath room on the previous day. The condition of nausea and weakness lasted for several days, and then gradually passed off. I should add that there was nothing hysterical about the patient, who is a most capable and sensible woman.

Nuneaton.

CONCURRENT VARICELLA AND SCARLET FEVER.

BY SIDNEY H. SNELL, M.D. LOND.

A PATIENT four years of age was shown to me in a house where I was attending two cases of scarlet fever (the patient's sisters). The child was very feverish, and over the face and body there was a typical varicella rash. On the following day a profuse scarlatinal rash also appeared, so that the two rashes were concurrent. Each rash ran the usual course peculiar to itself, and the patient after the second day was so little affected that she was with difficulty kept in bed. The child subsequently desquamated. About ten days later the two children who had had scarlet fever exhibited well-marked varicella rashes. This is therefore a case where abundant proof is available that the two rashes were beyond doubt those of scarlet fever and varicella respectively, and that the two diseases occurred in this child at the same time.

Grays, Essex.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF CHOLECYSTOTOMY; REMARKS.

(Under the care of Mr. WILLIAM ANDERSON.)

A COMPLETE change has taken place in our views as to the advisability of performing operations for various conditions due to gall-stones. Now an operation is done as a matter of course where a year or two ago it would not have been considered possible, and the suggestion even would have been regarded as foolish. We doubt if the ordinary operation for the removal of gall-stones from the gall-bladder is as serious an operation as that for removal of a stone from the urinary bladder. The surgery of the bile-ducts alone now demands a chapter to itself and various methods of treatment for calculi impacted in those ducts have been successfully tried: (1) extraction by means of forceps after excision of the gall-bladder aided by manipulation; (2) crushing of the stone by specially devised forceps passed down the duct, or by forceps with padded blades applied to the duct externally, followed by washing out of the fragments; and (3) removal of the stone through an incision in the wall of the duct, the opening being afterwards sutured. For a long time incision of the duct (choledoctomy) was avoided, as it was feared that bile might escape into the peritoneum and cause a fatal peritonitis. Now this method is becoming more frequently resorted to in difficult impactions, for it is understood that healthy bile in small quantities is not very irritating, and that the risk of peritonitis is comparatively slight. There are not many of these cases on record, and Mr. Anderson's may be regarded as an excellent example of the operation, and the precautions which were taken to prevent the unnecessary passage of bile into the peritoneum should be especially noted. The hæmorrhage from the wound on the twelfth and thirteenth days after operation is probably a special danger in choledoctomy, for Dr. Küster[1] has published notes of a similar operation in which severe secondary hæmorrhage occurred on the eleventh day, making it necessary to reopen the wound.

The patient, a married woman aged thirty-four years, was admitted into St. Thomas's Hospital under the care of Dr. Payne on Dec. 21st, 1893. She had been in good health until five months previously, when she was suddenly attacked by a violent pain in the right hypochondrium associated with vomiting and considerable prostration. The urine is said to have been of the colour of porter, but there was no yellowness of the skin. The attack subsided in the course of a few days, but recurred seven weeks before admission, and was then attended by strongly marked jaundice. From this time similar paroxysms appeared at frequent intervals, until the period of entrance into the hospital. On admission the patient was feeble and emaciated, and her skin and conjunctivæ were deeply stained with bile. There was slight tenderness in the right hypochondrium, and the area of hepatic dulness extended a little below the costal margin, but the gall-bladder could not be felt. The bowels were constipated, and the motions when passed were of a clayey colour and very offensive. The urine was deeply tinged with bile pigment. During the following three weeks the attacks of biliary colic occurred daily, and were associated with severe vomiting. The tenderness in the region of the gall-bladder was increased and the patient complained of severe pain radiating from this point. From Jan. 18th to Feb. 10th the symptoms intermitted and the jaundice almost entirely disappeared; but on the latter date a violent attack of colic set in, and returned daily during the next fortnight. At the end of this time it was decided after a consultation to explore the gall-bladder.

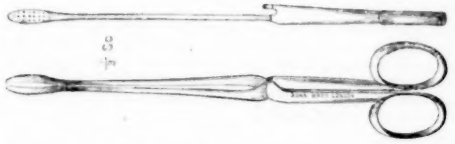
The operation was performed by Mr. Anderson on Feb. 25th. An anæsthetic having been administered, an incision was made in the right semilunar line a little below the costal margin. The edge of the liver appeared opposite the wound, and on drawing this upwards the gall-bladder could be felt in the usual position, but its fundus was retracted about an inch behind the hepatic border. A hard body was detected about the junction of the cystic and common bile-ducts. As the gall-bladder could not be brought up to the external incision a large sponge was pressed into the abdominal cavity beneath the biliary ducts. A small opening was then made at the fundus of the gall-bladder, the interior was sponged out, and a calculus lying opposite the opening of the cystic duct was withdrawn without difficulty by means of a pair of forceps. The stone was of the usual character, about half an inch in diameter, and facetted on three surfaces. On further exploration a second calculus was found impacted in the common duct close to its junction with the cystic duct. All attempts to expel this failed, and it constantly eluded the grasp of the forceps. A scoop was then introduced and passed readily by the side of the stone, which, however, could not be withdrawn, and it was necessary to extract it through an opening in the lower aspect of the common duct immediately below the point of obstruction. The second stone

[1] New York Medical Journal, Dec. 17th, 1892.

closely resembled the first both in form and size. As no other foreign body could be felt, the wounds in the duct and gall-bladder were closed with sutures of fine silk, a procedure of some difficulty, owing partly to the great lacerability of the walls of the bladder and duct, and partly to the great depth of the opening in the latter. The escape of bile appeared to be completely checked, but it was judged advisable to bring up the omentum in such a way as to form a kind of channel which would conduct in the right direction any extravasation that might occur. A long plug of iodoform gauze was introduced down to a point behind the sutured duct and brought out at the external aperture, which was finally narrowed as far as necessary by silk stitches. On the following day the patient was in good condition and free from pain and fever, but bile was escaping in considerable quantity from the parietal opening. The flow continued for about a week, diminishing daily, and then ceased altogether. The bowels were opened on the fifth day, the stools being hard and pale, but slightly tinged with bile. The further progress was almost uneventful, the jaundice lessening and the strength and appetite returning day by day. On March 7th, ten days after the operation, the plugs were withdrawn. A slight alarm occurred on the 9th and 10th on account of a somewhat free hæmorrhage from a vessel in the depth of the wound, but this soon ceased, and recovery thenceforth advanced rapidly. Before the end of April the jaundice had disappeared, the fæces had resumed their normal character, and the wound was reduced to a sinus that scarcely admitted a probe. The patient was discharged on May 1st. She had then become stout and clear-skinned, and expressed herself as feeling better and stronger than at any time for several years past.

Remarks by Mr. ANDERSON.—The case illustrates three of the difficulties that may complicate the operation of cholecystotomy. The fundus of the gall-bladder could not be brought to the abdominal wound; the walls of the receptacle and ducts were so lacerable that they broke away under traction almost as readily as wet pasteboard, and hence would not hold a suture securely; and lastly, the deeper of the two calculi could neither be grasped by forceps nor expelled by manipulation, and consequently it was necessary to extract it through an opening in the common duct at a point so far from the surface as to be very difficult of access for suture. The stitches, indeed, proved to be insecure, but they were probably useful in confining the secretion within its proper channel for a few hours while peritoneal adhesions were becoming established. However this may be, the bile escaped freely from the external wound along the track of the plug without setting up any sign of general peritonitis.

The great difficulty of manipulating forceps to seize a foreign body at the end of a long narrow passage like the bile-duct or the urethra is familiar to every surgeon, and the attempt is not free from risk of serious injury to the soft parts when the walls of the tube are lacerable. On the other hand, such an instrument as a scoop can be passed with facility by the side of the object; but as it affords little direct traction power it often fails to effect its purpose. It struck me, during the abortive efforts to grasp the calculus, that had I been able to introduce the two blades of the forceps separately, after the manner of using midwifery forceps, I could have seized and delivered the deeper calculus without subjecting the patient to the danger of an opening into the common duct. I have since had a trial pair of forceps made on this principle by Messrs. Down Brothers (see engraving), and my experiments on the dead subject



lead me to hope that such instruments would be a useful addition to our surgical armament. The midwifery lock answers well, and allows the blades to be worked together or separately, while the absence of a connecting pin has advantages in the direction of antisepsis. Its use would, of course, not be restricted to the extraction of calculi from the gall-ducts, urethra, or any other natural passage, but would extend to deep wounds or sinuses of all kinds.

BRADFORD INFIRMARY.

A CASE OF OBSTRUCTION OF THE BOWELS TREATED BY SHORT CIRCUITING OF INTESTINE; NECROPSY; REMARKS.

(Under the care of Mr. W. H. HORROCKS.)

THIS case is a very instructive one, and will be read with interest by those engaged in abdominal surgery. There can be no doubt that the method of short circuiting tried by Mr. Horrocks is, when successful, the most comfortable for the patient if it is not possible to remove the cause of the obstruction by resection. This patient's life was prolonged with a considerable degree of comfort, death being caused by the accumulation of fæces above the stricture, producing stercoral ulcers which perforated the bowel. Should a similar condition be met with again it is probable that an opening into the portion of bowel shut off would suffice to give relief for the local accumulation, whilst the short circuiting would prevent any excessive discharge through the opening and prevent it causing any great annoyance to the patient. The fatal result ensued within six weeks after operation, and at that time there was no evidence of contraction of the opening between the parts placed in apposition (it is rather early, however, to meet with it), and in other respects the site of operation was satisfactory. For the report of this case we are indebted to Mr. T. J. Wood, house surgeon.

A man aged sixty-one years was admitted to the Bradford Infirmary on Dec. 9th, 1893, complaining of "stoppage of the bowels" and vomiting. The vomiting, which had lasted a month, did not occur every day, but the patient was not free from it for more than two or three days at a time. The vomited material was copious in quantity and frothy, but not dark or foul smelling. The constipation had been absolute for four days prior to admission to hospital, neither flatus nor fæces having been passed. The illness commenced six weeks before admission, with pain to the right of the epigastric region, which was rendered worse by ingestion of food. After a fortnight the vomiting commenced, and had continued until admission. On admission the abdomen was found to be tensely distended, the umbilicus was everted, coils of intestine were distinctly visible through the abdominal wall, and movements of the bowels were sometimes seen. The percussion note was tympanitic everywhere except in the right flank, where it was dull. On palpation no tumour was felt, but there was increased resistance in the right iliac fossa. There was no marked tenderness anywhere. No tumour was discovered per rectum, but the distended intestines were felt, pressing downwards upon the fingers in the rectum. The general condition of the patient was fairly good. He complained chiefly of the distension. The temperature was 98° F. The bowels were open freely by an enema the day after admission, the motion being partly formed. On the third day about half a pint of material resembling pea-soup was vomited, which had not a definitely fæcal odour. The diagnosis of stricture of the large intestine was made on account of the rather late supervention of vomiting and from the general character of the distension. Having regard to the age of the patient, and the gradual onset of symptoms, it was presumably malignant in character. On Dec. 12th all feeding by the mouth was stopped, nutrient enemata and suppositories being substituted. A purgative injection was given every day. On the 14th the abdomen was much less distended. There was now felt just inside the right anterior superior iliac spine a soft mass as large as the fist, probably fæcal. On the 15th the obstructive symptoms had disappeared; rectal feeding was stopped and fluid food was given by mouth. On the 22nd the abdomen had again become distended. He vomited on the previous day. Rectal feeding was again commenced. On the 28th the distension had disappeared. He was fed again by mouth. On the 31st he had diarrhœa. He passed motions of liquid fæces, no pus, but a little bright blood from hæmorrhoids. The bowels acted as many as six times on some days. The diarrhœa lasted till Jan. 5th. On Jan. 11th the patient felt better than he had done at any time since his admission to hospital. The abdomen was not distended. An ill-defined mass could be felt in the right hypochondriac region. The bowels were now opened twice or three times daily. The temperature was 100°. The tongue was thickly furred and moist; the pulse was 88, with

fair tension, regular, and intermitted once in a minute. The arteries were hard. The first sound of the heart at the base was muffled. Bronchitic râles were heard over the right base. The urine was of sp. gr. 1019; there was no albumen, but a deposit of mucus. On the 13th, the patient being under the influence of chloroform, an incision five inches long was made in the right linea semilunaris, and the abdomen was opened in the usual way. No large tumour was found, but at the lower part of the hepatic flexure the bowel appeared to be bound down or contracted, and at this point two small nodules the size of a pea were felt in the coat of the gut. The bowel below was distended, but above it was collapsed. There was no mesocolon, and the bowel could not be raised to the surface. It was then determined to short circuit the obstructed bowel, which was performed in the following way. About four inches each of the transverse colon and of the lower end of the ileum were emptied of their contents and isolated by temporary elastic ligatures. They were then placed side by side and united longitudinally by a continuous Lembert suture of silk. The walls of the intestine were then incised, and a pair of Littlewood's bone plates inserted through the openings. The plates were then fitted together, and the ring of suture completed, so as to pass round the plates. Finally, to give further security, the omentum was wrapped round the bowel at the seat of operation, and fixed in position by two or three points of suture. The abdominal cavity was now sponged out, and the wound closed by silkworm gut sutures. A Keith's drainage-tube was inserted at either end of the wound. The operation lasted forty minutes, and was well borne. The patient passed flatus in twelve hours and fæces on the second day after operation, and the bowels were moved by enema on the fifth day. The abdomen was now flat and natural in appearance. He passed a partly formed motion on the tenth day. There was some suppuration about the deep stitches. The temperature after the operation was slightly elevated, reaching 101·4° on the eleventh day. On Feb. 10th there was some distension of the abdomen, which was relieved by enema. The patient now commenced to lose ground, and although he took nourishment well until near the end he became weaker and more emaciated, and the tongue was dry and brown. The pulse became more rapid, and intermitted notably. He was much troubled with cough and there was dulness to percussion over the right base behind, with coarsely crepitant râles. The temperature had now increased to 102°, a bedsore formed over the sacrum, and the patient died on Feb. 28th, six weeks after the operation. The immediate cause of death appeared to be hypostatic pneumonia.

Necropsy.—At the post-mortem examination, made eighteen hours after death, the coils of small intestine were found to be somewhat distended, two loops being bound down into the pelvis by the results of recent peritonitis. The omentum covered the ascending colon, and was adherent to the parietal peritoneum behind the wound. On separating these adhesions an abscess was opened below the right lobe of the liver, bounded by the ulcerated under surface of the liver above, by the parietal peritoneum on the outer side, and by the adherent colon and omentum in front. The ascending colon was distended with fæces, and had ruptured at several spots. Its calibre was narrowed below the liver, but its coat at this point was not considerably thickened. The artificial opening between the ileum and the transverse colon was an oval aperture about an inch and a half in its greatest length, with sharp well defined margins. The mucous membrane on the colic side showed one or two spots of ulceration, apparently where stitches had passed. The union between the two portions of intestine was firm, the omentum covering and adhering to the coils. Owing to the destruction of the tissues caused by the abscess, it was difficult to determine the exact nature of the stricture, but it appeared to be due to a mass of soft growth at the back of the bowel.

Remarks by Mr. HORROCKS.—The diagnosis of the site and cause of obstruction were substantially correct, the mass described as felt before operation being due to accumulation of fæces behind the stricture. With regard to the treatment at the time of operation, the original idea had been to resect the affected intestine; but this was at once seen to be impracticable, owing to the fixity of the parts involved. The other alternatives were short circuiting, right inguinal colotomy, or anastomosis between the ileum and sigmoid flexure. The ileum was the lowest piece of intestine which could be conveniently brought into apposition with the transverse colon, and the objection to this procedure was made evident by the result of the case. The fæces in part passed onwards through the ileo-cæcal valve up to the constriction, and were prevented from returning by the valve. This accumulation finally led to perforation. On the other hand, it might be supposed that as the fæces prior to the operation had to some extent passed the constriction, such fæces as did not go through the fistulous opening would continue to pass through the stricture. If the ileum had been connected with the sigmoid flexure the flow of fæces would have been more direct, and less would have passed into the colon; but in this case it would have been necessary to make a second opening on the left side of the abdomen, and, further, the whole colon would have been cut off from the digestive tract. With regard to right inguinal colotomy, although the patient's life might have been somewhat prolonged by this procedure, the whole colon would still have been cast off from the digestive tract, and the constant passage of liquid fæces would have caused great irritation and exhaustion.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Actinomycosis extensively involving the Skin.

AN ordinary meeting of this society was held on Nov. 13th, Mr. HUTCHINSON, President, being in the chair.

Dr. J. J. PRINGLE read a paper on a case of Actinomycosis extensively involving the Skin. The subject was treated from a purely clinical standpoint, as the patient was still living, and was demonstrated to the society. He was a boy aged thirteen years, whose family had lived until recently over a stable-yard, and was admitted in February, 1894, to the Middlesex Hospital suffering from an apparently simple attack of serous pleurisy, from which he recovered in a month, with marked retraction of the affected (right) side. Shortly afterwards he was readmitted to a surgical ward on account of abscesses over the front of the chest and right hip, which were considered as tuberculous, and scraped. He returned to the hospital on Sept. 28th with a very extensive tract of disease implicating the skin, chiefly of the back. The characters of the skin disease were described in detail, the most prominent feature being the presence of large sarcomatous-looking growths, ulcerating at various points, situated upon hard, brawny, and deeply undermined skin. From the ulcerative points pus exuded, mixed with characteristic yellow granules, readily recognised microscopically as composed of actinomyces. There was strong presumptive evidence of invasion of the right lung, pleura, liver, kidney, and retro-peritoneal and pre-vertebral tissues. Treatment by iodide of potassium and thyroid tabloids appeared to be attended by benefit, and reasons for the treatment adopted were given. The case was regarded as an example of actinomycotic invasion through the respiratory tract. Special attention was directed to the characters of the skin affection, which differed materially from those of cases described, and points of differentiation from other skin affections which most closely resembled it were laid down. The paper was accompanied by a life-sized water-colour drawing and microscopic preparations of the fungus.

Dr. STEPHEN MACKENZIE agreed that the case was one of extreme rarity. He had recently seen a child aged eleven years who presented on the face and neck a lesion of the skin with which he was unfamiliar. It evidently belonged to the class of granulomata and presented indurations erythematous in character, on which were globular masses varying in size from a pea to a small cherry, semi-translucent, soft, spongy, and exhibiting yellow points. The child had been under the care of Mr. Eve in September, 1893, with a sinus on the right side of the cheek; the wound was probed and found to lead to bare bone on the inner side of the lower jaw. The sinus was scraped and irrigated, and soon healed. In June, 1894, he returned with granulations projecting from the sinus, which had reopened; actinomycosis was then suggested and the ray fungus looked for without success. It was again scraped and again got well. The lesions at the present time were

much like those in the case shown, except that there were no gummy discharge and no escape of yellow particles. The patient's father was a stableman and the child had lived and played in the stable until two years before admission.

Dr. DOUGLAS POWELL said that the disease should not, in his opinion, be classified as a skin disease, for it had cropped up here and there, having extended from deeper parts. The previous attack of pleurisy was interesting in the complete way in which it had cleared up, and in this respect it resembled some cases of tuberculous pleurisy. He suggested that the albuminuria might possibly be due to albuminoid change, and in this connexion the fact that the liver was enlarged was noteworthy. The improvement noted in the child was probably due to causes other than the use of thyroid tabloids, and he asked Dr. Pringle whether any other physiological effects besides vomiting, such as hurried pulse, had been noticed from using the thyroid extract. Almost all cases had been traced to contamination by straw, though it was not known exactly how the infection arose.

Mr. GODLEE had recently seen in conjunction with Dr. Fairweather a case of actinomycotic disease about the cæcum, which pointed in many places. In the case he had shown in conjunction with Dr. Powell the boy was a cow-keeper, and the appearances of the growth in the skin where it approached the surface, forming bulging masses, were like those in the case shown; in Dr. Fairweather's case the openings of the sinuses were all quite flat, and the patient improved under iodide of potassium. It should be remembered that in scraping these sinuses the hæmorrhage was liable to be excessive.

Mr. MALCOLM MORRIS said that the graphic report of the case was useful for differential diagnosis. He asked whether there was any evidence of direct inoculation of the skin from the trickling of gummy fluid over it, and also if Dr. Pringle had any explanation to offer as to how the lesions about the hip and chest arose.

Dr. FAIRWEATHER said he had commenced treatment by giving five grains of iodide of potassium three times daily without any result. The dose was then advanced to twenty grains with very marked improvement. There were thinning of the discharge, diminution of the granulations, and disappearance of the clubbed elements; the abscesses had nearly closed up and the patient had gained in weight during the last six weeks. When the remedy had to be given up on account of gastric disturbance the granules reappeared in large quantities. The patient was not connected in any way with horses or cattle.

Mr. GODLEE added that this patient was known to be fond of chewing corn.

Dr. KINGSTON FOWLER said that when the case was under his care for pleurisy there was no indication of actinomycosis. The peculiar appearances of the granulations as they affected the skin were quite typical of the disease.

Dr. BARLOW said that a case was under his care five years ago which he did not at the time recognise. Later the necropsy was performed by Dr. Delépine, who found very extensive disease in all the cavities of the body and who had published the account in the Pathological Society's Transactions for 1889. In that case the tumours diminished considerably under iodide of potassium.

Dr. FREDERICK TAYLOR had published a case, in the Guy's Hospital Reports, of actinomycosis of the liver which had commenced to affect the skin. There were deposits in the lungs, and he suggested in his paper that they were carried there by the bloodvessels. He had been unable to find out how the lesion had occurred. He referred to the satisfactory result which followed in Dr. Ransome's (jun.) case, in which, amongst other drugs, iodide of potassium was freely given.

Dr. SAMUEL WEST mentioned a case of abscess of the abdominal wall which discharged itself spontaneously, and in which there had been no infection of the skin. Post mortem masses of growth were found spreading from the left side and involving the skin. It was regarded at first as specific, and iodide of potassium was freely given, but with no effect.

Dr. PRINGLE, in reply, reminded Dr. Mackenzie that it was often difficult to find the organisms of actinomycosis. It was an important fact that the cases of actinomycosis with pleurisy tended to recover, but with an undue amount of shrinkage of the affected side. He had come to the conclusion that the boy was not suffering from albuminoid disease. The collapse and vomiting disappeared when the thyroid treatment was stopped. Surgical interference in the case he had shown was contra-indicated. There was no evidence of direct inoculation of the skin &c., and he was unable to explain the *rationale* of the metastatic deposits.

MEDICAL SOCIETY OF LONDON.

Cæcal Colotomy for Malignant Intestinal Obstruction.—Late Inherited Syphilis.—Anastomosis of Small Intestine.—Dislocation of Humerus with Fracture of Surgical Neck.—Aneurysm of Popliteal Artery.—Unusual Villous Tumour of Bladder.—A Cretin under Thyroid Treatment.—Mycosis Fungoides.—Adenoma Sebaceum.—Epithelioma of Face.—Enlarged Inferior Turbinated Bones associated with Nasal Polypi.

A CLINICAL MEETING of this society was held on Nov. 12th, the President, Sir WILLIAM DALBY, being in the chair.

Mr. GOODSALL brought forward a case in which the Cæcum had been opened for Intestinal Obstruction caused by Cancer. The patient was a man aged sixty-two years, who was admitted into the Metropolitan Hospital on Sept. 18th, 1894. The next day Mr. Goodsall made the incision for left inguinal colotomy and opened the abdomen, but he could not bring the colon outside, because it was packed with semi-solid fæces. He fastened the sigmoid flexure to the wound, passing the stitches through the longitudinal muscular band. The second day afterwards he found that the sutures had torn through, and that some of the appendices epiploicæ had slipped out. Three days later still he removed the appendices. The following day, as the patient was sick and was suffering from abdominal pain, Mr. Goodsall decided to open the cæcum. He found the cæcum and ascending colon distended with putty-like fæces, but by manipulation he freed an inch and a half of the front wall of the cæcum from its contents, and then fixed the bowel to the parietes and opened it, keeping the patient on the operating table for forty-eight hours afterwards. He held that this operation was easy, that no prolapse of the intestine would follow, and that it gave comfort to the patient, who usually gained in weight after it.—Mr. CRIPPS said that in half a dozen cases he had opened the cæcum when, on cutting down, he found the sigmoid empty. There were grave objections to opening the cæcum if it could be avoided, the chief trouble being the fluidity of the motions and the consequent difficulty in keeping the patient clean. He asked why the distended sigmoid was not stitched to the parietal peritoneum and both structures then allowed to drop back.—Mr. KEETLEY said that in obstruction of the colon in certain cases the appendix vermiformis might be used as a kind of spout, being brought up into the wound and its extremity opened and dilated: it would thus drain off any accumulated fæces.—Mr. H. ALLINGHAM said that if on performing left inguinal colotomy the gut were found collapsed the opening should be enlarged and the hand passed in to find the seat of obstruction and then the colon could be opened proximal to it, a transverse colotomy being done if necessary.

Dr. DE HAVILLAND HALL exhibited a case of Late Inherited Syphilis, upon which Mr. Spencer Watson and Mr. Bloxam commented.

Mr. H. CRIPPS showed a successful case of Anastomosis of the Small Intestine. The patient was a woman aged thirty-one years, who was admitted into St. Bartholomew's Hospital in February last with abdominal tumour. A large fibroid was removed from beneath the broad ligament, and the patient did well until the eighteenth day; then she developed signs of intestinal obstruction. For this Mr. Bruce Clarke did abdominal section, and opened the small intestine, which was adherent to the under surface of the abdominal scar. This was left open as an artificial anus. Later two attempts under an anæsthetic having failed to close this, an elliptical incision was made into the abdominal wall, including the portion of skin in which was situated the artificial anus. The original seat of obstruction in the intestine was found nine inches lower down, and due to adhesion of the gut to the scar in the broad ligament. In detaching this the gut was almost torn through, and so he excised this portion of the gut together with the artificial anus, removing altogether eleven inches and a half of intestine. The part removed was high up in the jejunum. Intestinal anastomosis was then performed by Maunsell's method, additional Lembert's sutures being passed for safety. The patient recovered and was continuing her work

as a domestic servant. It was best in these cases to make an artificial anus first and then perform anastomosis later. He preferred to use a plan of simple suture rather than resort to bone plates or bobbins.—Mr. KEETLEY said that he had resected a portion of intestine at the ileo-cæcal valve, together with a tumour by Maunsell's method, with a good result. Patients suffering from chronic inflammatory disease (except carcinoma) recovered from these operations in an extraordinary fashion. In the case of bobbin *versus* suture an immense amount of collective evidence was accumulating, and it was at present premature to form a judgment on the matter.—Mr Bloxam and Mr. H. Allingham also spoke.

Mr. H. H. CLUTTON showed a case of Dislocation of the Humerus with Fracture at the Surgical Neck. The patient was a boy aged thirteen years who was admitted to St. Thomas's Hospital on March 19th, 1894, the wheel of a van having passed over his left shoulder and left side of his chest. There were severe shock from injury of the left lung and marked depression of the side of the chest, with fracture of many ribs; there was wide-spreading surgical emphysema. He remained in a precarious condition for some days and then slowly improved. Eleven days after the accident he had sufficiently recovered for an anæsthetic to be administered, and when this was done diagnosis of dislocation of the shoulder with fracture of the surgical neck of the humerus was confirmed. The head of the humerus lay immediately beneath the clavicle, firmly fixed between it and the outer side of the coracoid process; the upper end of the shaft lay to the outer side of the head of the humerus, the shortening being marked. A very little manipulation showed that the head of the humerus could not be moved from its new position without incision. A cut was therefore made from the clavicle down to the seat of fracture, which was found to be oblique and above the insertion of the pectoralis major. The capsule of the joint was opened, and traction failing to pull down the head of the bone the capsular wound was enlarged upwards and inwards, and in doing so the tendon of the biceps was divided. The head of the bone was then returned to the glenoid cavity by direct pressure and traction. A drill was passed vertically through the head of the humerus from the articular surface down the centre of the bone into the lower fragment, an ivory peg driven into the hole thus made firmly fixing the two fragments together; by this means bandaging and splints were avoided. The divided biceps tendon was sutured with fine silk and the capsule closed with catgut. The union of the bone felt quite firm on April 25th. McBurney's traction hook would have been successful in bringing the heading of the bone down, but his paper had not then reached England.[1] At the present time the movements of the shoulder-joint were perfectly performed. Passive movement of the joint had not been practised during healing. There was at the present time a keloid condition of the scar, though the wound had healed quickly without suppuration.—Mr. SHEILD had seen two instances of this accident in adults; in both the head of the bone had been got back into place by direct pressure.

Mr. ASTLEY BLOXAM showed a man aged fifty, who was admitted into Charing-cross Hospital in October, 1890, with Popliteal Aneurysm. Compression and other means of treatment having failed, the femoral artery was ligatured in Scarpa's triangle. He left the hospital later with the aneurysm solid and much smaller. In 1893 he was again admitted for coldness and numbness of the right foot, which was worse when lying down. The solidified aneurysm was dissected out and the wound rapidly healed, the man being cured of his pain and numbness. It was remarkable what a slight change there was in the appearance of the clot, which, microscopically, showed but little tendency to organisation.

Mr. HURRY FENWICK showed a patient from the Neck of whose Bladder he had removed a Villous Growth. He asserted that clinically these tumours fell into two divisions. The commoner (92 per cent.) complained of painless intermittent hæmaturia, and the rarer (8 per cent.), of which the patient was an example, showed irritability of the bladder and obstruction to the stream before the bleeding commenced. In the latter class the irritability was due to the growth falling on to the outlet of the bladder or growing around it, thus obstructing the stream. He stated that in sessile growths the removal was less easy, but the danger was not so great as in the pedicled variety, where the removal was easy, but the surgeon had to reckon with the backward pressure changes which the obstruction had induced in the kidneys. He made it an absolute rule never to cystoscope a villous growth unless he was prepared to remove it then and there if it proved to be benign.

Dr. A. E. GARROD showed a Cretin under Thyroid Treatment. She was seven years of age when she came under observation in 1890 at the Hospital for Sick Children, Great Ormond-street, and she was at first treated with arsenic and iron. In February, 1893, thyroid treatment was commenced. In May, 1893, three grains were given once daily, and this was continued for a year, and since May, 1894, two grains had been given once a day. She had gained five inches in height during the nine months' treatment, and had also gained in weight.

Mr. ASTLEY BLOXAM showed some enormous Renal Calculi.

Dr. MORGAN DOCKRELL showed a case of Mycosis Fungoides in a woman aged thirty-eight.

Dr. DOCKRELL likewise showed a case of Adenoma Sebaceum. A lad nine years of age suffering from epilepsy from seven weeks after birth developed the eruption on the face at four years and a half of age. The chief points of interest were that the eruption was preceded by fits for over four years; that telangiectasis was a prominent sign; that the disease was symmetrical; and that moles and some small fibromata were present.

Dr. HERBERT SNOW showed a man aged fifty-six years from the left side of whose face he had removed an Epitheliomatous Growth by the Thermo-cautery. He held that burning produced a retrocession of the cancerous growth, followed by cicatrisation.

Mr. SPENCER WATSON showed two Inferior Turbinated Bones with Polypoid Masses at their Anterior Extremities. These had been removed from a man aged sixty-two years, and they had been associated with nasal polypi.

[1] Annals of Surgery, 1894, vol. i., p. 409.

CLINICAL SOCIETY OF LONDON.

Traumatic Rupture of the Neck of the Bladder.—Scleroderma.—Excision of the Scapula for Chondroma.—Tuberculous Disease of the Prostate.—Extensive Primary Muscular Atrophy.—Trephining for Traumatic Epilepsy.—Bullet Wound of the Parietal Lobe with few Symptoms.—Facial Eczema following Typhoid Fever.—Acromegaly.—Incomplete Graves' Disease with Nasal Polypi.—Multiple Nodules of Doubtful Nature.—Charcot's Disease of Hip-joint.

A MEETING of this society was held on Nov. 9th, Mr. HULKE, President, being in the chair. This meeting was the first held under the new rules, beginning at the usual hour, and the whole of the time being devoted to the demonstration of cases. The popularity of the innovation was shown in the very large attendance of members and the abundance of excellent clinical material.

Mr. HURRY FENWICK showed a case of Traumatic Rupture of the Prostatic Neck of the Bladder. The patient had been buried whilst excavating. He had passed urine just before the accident. On being got out he presented symptoms of extra-peritoneal rupture of the bladder. A catheter was passed, but only a little blood was withdrawn. Twelve hours after the accident a supra-pubic incision into the cavity of Retzius evacuated an immense quantity of blood, and it was then found that the bladder had not been ruptured, but that the prostato-membranous urethra had been torn nearly across, and that the hæmorrhage proceeded from an extensive laceration of the plexus of Santorini. The bladder was drained through a perineal incision. Mr. Fenwick urged that supra-pubic incision in all doubtful cases should precede the opening of the peritoneum, and he believed that most extra-peritoneal uncomplicated ruptures ought to be cured.

Dr. W. P. HERRINGHAM exhibited a case of Scleroderma. The patient was a man aged thirty-nine years. Three years ago induration began in the lower part of the abdomen, and spread thence to the arms, chest, and legs. Two years ago the face was affected, and eighteen months ago the gums began to retract, the teeth became loose, and he began to have difficulty in protruding the tongue. There appears never to have been œdema save as an inflammatory complication due to an accident. The previous health was always good, and he denied syphilis. At present the case was typical. The skin of the face was tightly drawn, with an appearance of small scars on the nose; the nose was pinched and the lips very

thin. The hair of the scalp, eyebrows, and lips was very scanty, and that of the axillæ and pubes gone. The mucous membrane of the mouth was affected, preventing protrusion of the tongue, and causing glazing of the outer thirds of its upper surface. The eyelids were natural. The hands were greatly deformed by flexion of the first phalangeal joints and great rigidity of the whole of the fingers. The skin of the arms, of the legs, and of the upper half of the front of the trunk was involved; the back and sides of the trunk, and the lower part of the abdominal skin, were natural, or nearly so. Dr. Herringham said that that part of the abdomen which was first affected had recovered. There was a slight amount of albumen in the urine. The patient had been treated at Brisbane with oily inunctions, and lately for a couple of months at Greenwich with pilocarpine. He was now better.—Sir DYCE DUCKWORTH inquired if there were rheumatoid symptoms affecting the joints. In one case which he had seen not the slightest benefit accrued from the use of thyroid extract.—Dr. HERRINGHAM, in reply, said that there were no rheumatoid symptoms. The patient had ulceration of some of the stretched parts, such as the fingers and elbows.

Mr. WATSON CHEYNE brought forward a case of Excision of the Scapula for Chondroma. The patient was a man aged fifty, from whom he had removed the scapula five weeks previously on account of a large enchondromatous tumour of seven years' growth, involving the whole bone and projecting forwards into the axilla. The tumour weighed over ten pounds. The wound healed by first intention and the patient left the hospital sixteen days after the operation. The movements of the arm were steadily increasing in range and power. The chief point about the operation was that an incision was in the first instance made in the axilla through which the vessels and nerves were freed from the growth, the subscapular artery tied, and the muscles attached to the coracoid process divided.—Mr. HOWARD MARSH asked how long the tumour had been growing. He inquired if the diagnosis of chondroma had been verified microscopically. It was seldom that so large a growth could be removed under such favourable circumstances.—Mr. CHEYNE, in reply, said that the tumour had been growing seven years. Microscopically it was a pure chondroma. He promised to show the case again next year.

Mr. ARBUTHNOT LANE showed a case of Extensive Tuberculous Disease of the Perineum, Prostate, Ischio-rectal Fossa, and Rectum, which he had treated successfully by the introduction of glycerine and sulphur into the cavities. The condition was one of many years' standing, and had been preceded by tuberculous disease of both testicles. Before using sulphur Mr. Lane had scraped the cavities and plugged them with gauze and iodoform. In spite of this treatment the disease progressed, and the escape of urine from the bladder into the rectum, which was quite beyond the patient's control, became more marked. His wasting, pain, and misery were very great. Mr. Lane commenced the injection of glycerine and sulphur on Sept. 4th, 1894. At the present moment the pain had gone, the aperture in the bowel had closed, the ulceration about the aperture had healed, the prostate was firm, and except for the escape of a few drops of urine occasionally from a small perineal sinus the patient is practically well. On Sept. 4th he weighed 8 st. 11 lb., now he weighed 10 st., a considerable gain of weight in such a short period.

Dr. BARLOW exhibited a case of Extensive Primary Atrophy of the Muscles of the Limbs and Trunk with Lordosis and some Contraction of the Hips. The patient was a boy aged five. Dr. Barlow pointed out that no particular muscles were atrophied more than others, the atrophy being pretty general. The boy could perform both coarse and fine movements with the upper limbs, but the movements were feeble. On attempting to stand the back developed marked lordosis. The abdominal muscles were good. The electrical reactions were very peculiar. It needed a very strong faradaic current to excite contraction, but with such a current all the muscles could be got to contract. The constant current gave no reaction of degeneration. The knee-jerks were retained and sensation was unimpaired. There were no fibrillary twitchings and the sphincters were all right. The parents were both healthy. There were three other children, and one of them had slight under-development of the back part of the deltoids and the upper part of the pectorales. Nothing was noticed until the child proved unable to walk at twelve months of age, and since then the weakness had gone on increasing. Though in some respects the case resembled pseudo-hypertrophic paralysis, it was really very difficult to classify.—Dr. ORMEROD thought that this case was related to pseudo-hypertrophic paralysis and to the "myopathic" group. The French recognised three varieties—the pseudo-hypertrophic cases, those with wasting, and those in which the muscles were not visibly affected. Hoffman of Heidelberg had recently described cases of atrophy in children due to chronic inflammation of the anterior cornua, and it was curious that several of the cases which he described occurred in the same family.

Mr. BUTLIN showed a case in which he had performed Trephining for Traumatic Epilepsy. A man was admitted to hospital on Sept. 4th, having fallen eight feet, striking his head against the mantelpiece. There were no very marked symptoms beyond some drowsiness until Sept. 8th, when he had a fit, which recurred again and again, until, on his arrival at the hospital, the man was in his seventeenth fit. The onset of the symptoms pointed to a lesion of the left side of the brain in the neighbourhood of the face and the arm centres. Mr. Butlin accordingly trephined, and beneath the dura mater he came across a small clot of blood, and in the subarachnoid space underneath there were two or three drachms of fluid and the brain was distinctly depressed at that spot. He removed a second piece of bone, but discovered nothing further. He let out the fluid in the subarachnoid space and replaced the pieces of bone, and the man made a good recovery, there having been no fit since the operation, though his mental condition remained unsatisfactory for some time. There was a little suppuration along the drain which he had left in the lower part of the wound, and one of the pieces of bone was removed, a proceeding which he had since regretted.—Mr. GOULD referred to a case which was primarily under the care of Dr. Coupland in the Middlesex Hospital eighteen months ago. The man was first admitted into Charing-cross Hospital after striking his head in a bath. He was afterwards admitted to Middlesex Hospital for fits affecting the left side of the body. Trephining over the arm centre on the right side revealed nothing wrong with the bone or dura mater, but there was an excess of fluid in the arachnoid space. This was drained, but the operation did not completely relieve him, for he was not free from fits, and he had been since admitted into University College Hospital.—Mr. BARKER said that the case just referred to had been admitted into University College Hospital under his care. The patient then complained that he could not walk straight. He was suffering from confusion of ideas and intense pain in his head. He gave an entirely misleading history. There was loss of power on the right side, and there appeared to be a fracture on the left side; but when the head was shaved it was seen that this was the scar of the previous operation. There had been no fits for the last week.

Mr. JACOBSON showed a man who had been operated on for Bullet Wound of the Parietal Lobe. The wound had been inflicted while skirmishing on the West Coast of Africa, where he was struck by a bullet, which lodged in the lower part of the left parietal lobe or at the junction of this with the temporo-sphenoidal. He became unconscious, and five weeks after he returned to England, his wound closing for a time, then reopening, giving exit to pieces of bone and discharge. During this period there had been no hemiplegia, no hemianæsthesia, no crossed amblyopia. There were present visual aphasia, or interference with the visual perception of words, and alexia, or inability to read. Thus words read were readily understood, but words seen in writing, even the simplest, conveyed no meaning until he spelt them out. This state of things lasted ten weeks. Severe headache frequently occurred when the wound closed for a time. On June 27th an attempt was made at Plymouth to remove the ball, but as brain matter escaped this was desisted from. There was a sinus above and one inch and a half behind the left auditory meatus, and a probe passed through a jagged opening in the skull and to the left for three inches. Save for the headache his general health was excellent. On Oct. 19th the opening was exposed and enlarged, when Mr. Jacobson found the mouth of a sinus-like track in the dura mater blocked with granulations. This membrane was quite healthy all round. Two small pieces of bone were removed from a spot about three-quarters of an inch from the mouth of the sinus. Two inches further in the probe struck a foreign body which proved to be the bullet. This was removed by the aid of a sharp spoon. Mr. Jacobson showed the bullet embedded in granulation tissue. It was of hammered iron and faceted, and a similar bullet weighed 172 grains. The patient made a rapid recovery, and had since entirely lost his headaches.—Mr. HULKE said that it

was fortunate the patient had been shot with an iron ball and not a lead one, for the latter often broke up into fragments.

Dr. HALE WHITE showed a case of Eczema following typhoid fever. The patient was a boy aged ten years, who when near the end of a first relapse of typhoid fever developed a severe eczema, which began as a few vesicles near the lip, and rapidly spread so that the whole face and ears were covered; the eyes were affected with conjunctivitis. The condition slowly subsided and six weeks after its first appearance had quite disappeared.

Dr. HARRY CAMPBELL brought forward a man aged forty-six years, the subject of Acromegaly. The man noticed the commencement of the condition twenty-five years ago; no cause could be ascertained. There was considerable prominence of the superciliary ridges and slight exophthalmos. The loose tissue of the upper lids was pendulous and the skin of both lids pigmented. There was some malar prominence and the nose and lips were hypertrophied. The lower jaw was prognathic, the tongue soft, the palate and tonsils were enlarged, the ears were thickened, the clavicles enlarged, the ribs thickened, the sternum widened and lengthened. Both scapulæ were enlarged and there was slight kyphosis and lordosis. The hands and feet were greatly enlarged.—Dr. HANDFORD asked if glycosuria was present and if there was any affection of vision.—Dr. CAMPBELL, in reply, said that there was no glycosuria, but there was slight presbyopia.

Dr. SCANES SPICER showed a case of Incomplete Graves' Disease with Nasal Polypi in the person of a young woman who had been sent to him for the removal of the nasal growths. The thyroid gland presented the usual elastic feel, with thrill and pulsation; there was tachycardia (140 per minute) and fine tremors in the arms. The girl was, moreover, of a markedly neurotic type. He had removed a large number of the polypi, but some still remained. Since that had been done the patient had improved in some respects. He pointed out that both conditions were discovered together three years ago, so that it could not be said that the Graves' disease was due to nasal operations, as in Semon's case, reported to the society five years ago. He could not help thinking that the connexion between these two conditions was something more than a coincidence.—Mr. G. STOKER said he had recently seen a male patient aged thirty-three years with an enlarged thyroid gland and some hypertrophic intranasal growth. Galvano-caustic treatment had been applied to the nose and the thyroid gland at once commenced to shrink. Since then he had seen a second similar instance in a female, and treatment on a similar plan was being pursued.

Mr. GODLEE showed a man with Multiple Nodules of Doubtful Nature. He was aged twenty-eight years, and his trouble began in April of this year. There were numerous hard nodules on the eyelids, on the forehead, jaw, arms, condyles, &c., and on the knuckles. There was an enlargement of the bursæ over the olecranon and some thickening of the skin over the front of the forearms and on the buttocks. There were enlarged glands under the right sterno-mastoid muscle. There was no history of syphilis, rheumatism, or gout in the patient or his family. The blood was apparently normal. He had been given full doses of iodide of potassium without benefit, but Donovan's solution seemed to have caused a diminution in size of some of the nodules. Microscopically the nodules were said to be composed of fibrous and not lymphatic tissue.

Mr. BOWLBY showed a man with Charcot's Disease of the Hip with Dislocation. The patient was a man aged fifty-eight years. His history was that he slipped and dislocated his hip ten years ago, the dislocation being produced with hardly any violence. Since that time he had walked very lame. At present the affected limb was much shorter than its fellow. The upper end of the femur could be plainly felt on the dorsum ilii. There was evidently no head to the femur, but there was a great deal of new bone in the neighbourhood of the neck. The femur had great mobility on the ilium, and in walking moved up and down more than three inches. There was no pain whatever in the joint. The evidence of tabes was as follows: Lightning pains in limbs, dim vision and grey atrophy, absence of knee-jerks, and inability to stand with the eyes shut.—Mr. GODLEE asked if it were not possible that a spontaneous fracture had occurred, causing the loss of bone near the great trochanter.

Mr. WILLETT showed a case of Charcot's Disease in a man aged forty-four years. The symptoms had existed for six years and the disease was steadily progressive. The limb was shortened two inches and a quarter, but it could be drawn down for one inch. It was rotated outwards, and on attempting movement, outward rotation and abduction were limited; the movements were painless. There were large osteophytic deposits in the tensor fasciæ femoris, behind the trochanter, in the pubic region and inside the pelvis opposite the acetabulum. The patient could not stand with the eyes shut and both knee-jerks were absent.

OBSTETRICAL SOCIETY OF LONDON.

New and Speedy Method of Dilating a Rigid Os in Parturition.—Atrophy with Collapse (Cirrhosis), Fibroid Degeneration, and Angioma of the Ovaries.—Decidual Cast as Evidence of Extra-uterine Gestation.

A MEETING of this society was held on Nov. 7th, Dr. G. E. HERMAN, President, being in the chair.

Dr. FARRAR (Gainsborough) read a paper on a New and Speedy Method of Dilating a Rigid Os in Parturition. He related two cases of rigid os, in one of which, after endeavouring vainly to relax the cervix by the aid of chloral, bromide of potassium, and morphia, followed by most persevering attempts at digital and mechanical dilatation, with and without chloroform, he applied a 10 per cent. solution of cocaine preparatory to incising the edge of the os. After five minutes, on introducing the finger as a guide to the scissors the os was found widely dilated. In the second case, which like the first, was that of a primipara, forty-eight years of age, where no dilatation occurred, although the same means as were tried in the first case were used, he waited three days, and then applied the cocaine. In four minutes the os was found to have yielded. He considered the dilatation to be due to the cocaine in both cases.—Dr. AMAND ROUTH said that Dr. Dabbs of Shanklin had recommended cocaine as relieving the pains of the first stage of labour, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful.—Dr. LEITH NAPIER had found it difficult to produce anæsthesia with a 20 per cent. solution in gynæcological cases, and thought a much larger series of instances should be observed.—Dr. PETER HORROCKS thought that the action of chloroform on involuntary muscle was not yet known, and that the sphincter ani, the relaxation of which during anæsthesia was a signal of danger, was relaxed while the os still remained rigid. He mentioned that the injection of a 5 per cent. solution beneath the integument was more certain than painting the surface with a 20 per cent. solution.—The PRESIDENT said it was very difficult to draw a clear distinction between mere slow dilatation of the cervix, the labour being normal in every respect save speed, and dilatation arrested by some abnormal spasmodic contraction of the cervix, if such a thing existed. He thought a drug might influence the latter condition and yet not the former. In Dr. Farrar's cases it seemed as if there was something more than mere slowness of dilatation, for in one the condition was stationary for forty-eight hours, and in the other for three days, and the dilatation occurred with wonderful rapidity. Two cases were rather a slender foundation on which to base a therapeutic statement. If Dr. Farrar's results were confirmed by further experience he would have made a valuable addition to our obstetric resources.—Dr. FARRAR, in reply, said he did not pretend to explain the mode of action of the drug. He would try it in future cases and communicate the result to the society.

Dr. BRAITHWAITE then read a paper entitled "Atrophy with Collapse (Cirrhosis), Fibroid Degeneration, and Angioma of the Ovaries." After detailing the clinical histories of three patients suffering from this condition of ovary he described the histological characters of the affected organs. He concluded that the convolution of the surface present in the specimens was due to atrophy of the true ovarian stroma, an effect of deficient and feeble reparative power. The fibroid degeneration which was coexistent with the collapse was evidently not the cause of it, but was brought about by the same debilitating causes; and the fibroid degeneration, with the hyaline change in the vessels, and the angiomatous condition present, were exaggerated examples of what may occur normally in a senile ovary.—The PRESIDENT said that Dr. Braithwaite's paper dealt with an important subject. Many cases had been reported in which the ovaries had been removed because they were painful; and the cause of the pain was said to be that they were "cirrhotic"—that is, small, puckered, with few

follicles and much fibrous tissue. Dr. Braithwaite's case differed from these only in being much more fully and carefully reported than the majority of them. Healthy ovaries varied very much in the above characters. He knew of no criteria by which if two small, puckered ovaries—one taken from a patient on account of pain and the other from a patient who had no pain—were put side by side on a plate the ovary which was painful could be identified; nor did he know any writer who had attempted to describe such criteria.—Mr. TARGETT said that he had recently examined a pair of ovaries in which the curious folding of the serous surface, resembling the convolutions of the brain, was even more marked than in the specimens shown by Dr. Braithwaite. Microscopical examination revealed an advanced condition of chronic endarteritis, not of a syphilitic type; the lumen of the vessel in some instances was almost obliterated. He was of opinion that the glandular atrophy and fibroid degeneration in the organ might be due to the presence of this vascular lesion.—Dr. LEITH NAPIER mentioned the names of some writers who had dealt with the subject.—Mr. MALCOLM said that the ovaries referred to by Mr. Targett were removed in the course of an ovariotomy, and not for pain. One of them was attached to a large ovarian cyst, but the form of the ovary was quite distinct except at its junction with the tumour. The other ovary showed an extreme degree of corrugation of the surface.

Dr. W. S. A. GRIFFITH read a note on the Importance of a Decidual Cast as Evidence of Extra-uterine Gestation. A patient was admitted into hospital supposed to be suffering from extra-uterine gestation, which had not yet ruptured. A large uterine cast was found and removed from the vagina. On examination under an anæsthetic the uterus was found a little enlarged (two inches and a half), but no tumour was discovered in its neighbourhood. The cast was identical with those found in cases of extra-uterine gestation, and showed characteristic decidual cells. The woman's abdomen was opened, and no evidence of extra-uterine gestation was found. Dr. Griffith enumerated the different kinds of uterine casts and their distinguishing characters, and considered the case capable of explanation in one of two ways—either the uterus was capable of developing the decidua, which had been believed to be the result of fertilisation of an ovum alone without this stimulus, or, as appeared to him less improbable, a fertilised ovum might have provided the necessary stimulus either inside or outside the uterine cavity, but have completely disappeared. He was of opinion that in future we should regard a cast as evidence of the highest value instead of as conclusive of extra-uterine gestation.—Dr. REMFRY inquired if the size of the uterus had been ascertained by passing a sound immediately after the expulsion of the decidua, as this evidence would have been important in the diagnosis of the case.—Remarks were made by the President and Dr. Leith Napier, and Dr. Griffith replied.

The following specimens were shown:—

Dr. CULLINGWORTH: Primary Carcinoma of Fallopian Tube.

Dr. DUNCAN: Small Ovarian Cyst ruptured during Examination.

Dr. DAKIN: (1) Sarcoma of Ovary; (2) Fœtus of Seven Months and a Half expelled in Membranes with Placenta attached after much Concealed Accidental Hæmorrhage.

Dr. BLACKER: Rupture of Uterus.

Dr. GALTON: Uterine Fibroid enucleated after Abdominal Section, with Cystic Ovary from same case.

OPHTHALMOLOGICAL SOCIETY.

Lamellar Cataract and Rickets.—Complete Ankyloblepharon.

AN ordinary meeting of this society was held on Nov. 8th, the Vice-President, Dr. STEPHEN MACKENZIE, in the chair.

Mr. TREACHER COLLINS read a paper on Lamellar Cataract and Rickets. He pointed out how the opinion of Davidson and Homer, published in 1865, that lamellar cataract was the result of rickets, though widely accepted on the Continent, was not even referred to in a large number of the text-books on eye disease in this country. He then read several communications from physicians and ophthalmic surgeons collected for him by Dr. Barrett of Melbourne and Dr. Symons of Adelaide, as to the relative frequency of these two diseases in South Australia. The evidence thus obtained went to show that in Adelaide rickets was a very rare disease and lamellar cataract very infrequent; in Melbourne rickets had been until recently comparatively rare; it was more common now, but the severity of the affection was much less than in the Old World; lamellar cataract was exceedingly rare, and the honeycombed condition of the enamel of the teeth was not often met with. In Sydney, the oldest city in Australia, rickets was said to be as common as in England, but he had no statement as to its comparative severity; lamellar cataract was less frequent than in this country. In a recent visit he had paid to Persia he had endeavoured to ascertain the amount of these two diseases there. He had been assured by the medical men he met there that rickets was uncommon; the conditions of life, moreover, were not such as were usually considered as likely to favour its development. Amongst a very large number of eye patients he saw in that country he had only met with one case of lamellar cataract.—Mr. MARCUS GUNN said it was still a moot point whether the condition of lamellar cataract was brought about by changes before or after birth. The decision of this point would have an important bearing on the question of association with rickets.—Mr. JONES, who had spent twelve months as house surgeon and three months as ophthalmic house surgeon in Australia, said that he had seen no case of lamellar cataract or of rickets there.—Mr. SYDNEY STEPHENSON stated that he had examined all the newcomers to one parochial school, in all about 5000 children, and that among these he had only found four cases of lamellar cataract, the striæ being very fine and easy to overlook. Rickets was very common, and its effects were readily discerned in children five or six years of age.—Mr. SILCOCK referred to the President whether both conditions might not be due to one common cause.—Mr. POWER said that many lamellar cataracts were congenital and belonged to a period antecedent to that at which rickets occurred.—Mr. LANG contended that the changes in the lens involved the entire nucleus as well as the periphery, and that this as well as the development of the enamel dated from before birth. He thought the whole change was ante-natal.—Mr. MARSHALL thought that the occurrence of fits, lamellar cataract, and defective development of the enamel, being all referable to abnormal change in the epiblast, were probably associated with some ante-natal defect in the central nervous system.—Mr. LAWFORD, referring to the interference with the growth of the enamel being subsequent to birth, quoted the domestic cat as being sometimes the subject of lamellar cataract.—Similar changes in the eye of the rabbit as observed by Bowman were quoted by Mr. LANG, and in the eye of the Australian bear by Mr. MARCUS GUNN.—The PRESIDENT said that observers had not yet paid much attention to the association of lamellar cataract and rickets, and he was not sure how far such a connexion was established. He knew of no common cause of this condition and changes in the enamel organ. It was difficult to say whether the opacities in the lens were developed or only discovered after birth.—Mr. TREACHER COLLINS, in reply, said that though most of the speakers appeared to dissent from the proposition involved in his paper, none had attempted to explain the two conditions being absent in Australia. Rickets was to a great extent an evanescent disease, and its traces could not always be expected to be recognised in the subjects of lamellar cataract. The mode of development of the condition was but little known, as attention was only called to the lenses when the sight had become markedly defective. Calcification of the permanent teeth occurred at about the third year of life—that is, about the time that rickets prevailed. He met the suggestions of cataract in the lower animals by quoting Mr. Bland Sutton's observations on rickets in mammals.

Mr. KENNETH CAMPBELL (Cairo) communicated a paper on Complete Ankyloblepharon. The patient, a native of Upper Egypt fifty years of age, presented himself with a large rounded tumour which completely masked the right orbit. There was no evident appearance of palpebral fissure. The swelling was dull red and shiny, with some large veins on the surface, and measured laterally 4·8 c.m., vertically 3·2 c.m., and projected forwards 3·2 c.m. from the orbital margin, being tense but fluctuating, and moving coördinately with the lid of the other eye. The man stated that the sight had been lost since childhood, and that the swelling had appeared before on more than one occasion, but had subsided under poultices. A minute examination disclosed a trace of palpebral slit without eyelashes at the extreme lower margin of the tumour, and the opinion was formed that the case was

one of complete ankyloblepharon with retained, and probably semi-purulent, lacrymal secretion. This was confirmed on the day preceding that fixed for operation by the giving way of the skin in the centre of the upper eyelid, attended by escape of semi-purulent fluid and total collapse of the tumour. The palpebral slit was reopened and the conjunctival sac dilated to obviate recurrence, but no attempt was made to re-establish the lacrymal channels owing to the parts being too much altered by cicatrisation.

The following cases were shown :—

Mr. TREACHER COLLINS : Polycoria, with Deep Cupping of Optic Disc.

Mr. LANG : Cholesterine in the Lens.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

The Treatment of Aneurysm.—Double Mastoid Abscess with Septic Thrombosis of the Left Lateral Sinus.

A MEETING of this society was held on Nov. 2nd, Dr. E. WEST SYMES, President, being in the chair.

Mr. JESSOP read notes of a case of Aneurysm affecting Four Arteries in the same patient, which appears *in extenso* in our present issue, p. 1142.—Mr. LITTLEWOOD read the notes of two cases illustrating the Treatment of Aneurysms of Arteries of the Extremities by Extirpation of the Sac. This paper also appears in full in our present issue, p. 1143.—Mr. WARD had seen both of Mr. Littlewood's cases, and spoke in favour of the method advocated by him. He pointed out that when the Hunterian operation was not successful it failed in one of the following ways : (1) return of pulsation, (2) sloughing and giving way of the sac, (3) gangrene, and (4) secondary hæmorrhage. By extirpation the first two difficulties were overcome, the chances of gangrene were not greater than after the Hunterian operation, and secondary hæmorrhage had practically been put out of court by modern methods. He thought extirpation of the sac the most scientific and ideal method.—Dr. BARRS commented on the fact of the two aneurysms being present in the first case, and the consequent difficulty of deciding upon surgical treatment of the femoral aneurysm ; this becoming diffuse, the case became urgent, demanding interference, or the patient could not have recovered. (The case was admitted to the infirmary under the care of Dr. Barrs.)—Mr. MAYO ROBSON thought Mr. Jessop's case of great interest, showing the value of the Hunterian operation. He thought extirpation of the sac good treatment for diffuse aneurysms, but for other cases preferred the Hunterian plan.—Mr. J. CROSSLEY WRIGHT (Halifax) related a case he had charge of when he was house surgeon at St. Bartholomew's Hospital under Mr. Langton, in which the femoral was tied for popliteal aneurysm. Some days after this the sac gave way and clot presented. The clot was turned out and the popliteal artery ligatured above and below the opening. The patient made a good recovery.—Remarks were also made by the President, Mr. Hartley, Dr. T. Wardrop Griffith, and Dr. Trevelyan. Mr. Littlewood replied.—Mr. JESSOP, in reply, congratulated Mr. Littlewood upon the brilliantly successful issue in his two cases and remarked that whilst he agreed with the generally expressed opinion in favour of excising a diffused aneurysm in a limb he would nevertheless hesitate to apply the same treatment to an ordinary case of true aneurysm, seeing that aseptic ligature had ceased to be attended with the many dangers familiar to surgeons in bygone times. He would be pardoned for expressing himself in favour of the Hunterian operation when he told them that he had seven times tied the external iliac, once the internal, once the common femoral, and he knew not how many times the superficial femoral without having ever encountered secondary hæmorrhage or any of the other dangers so graphically depicted by Mr. Ward.

Mr. SECKER WALKER read notes of a case of Double Mastoid Abscess with Septic Thrombosis of the Left Lateral Sinus. The patient, a woman thirty-four years of age, had had double otorrhœa for four years. Abscesses appeared on each parietal bone a month previously to admission to hospital, but the mastoid region on each side seemed healthy. For a fortnight there had been constant vomiting and headache and rigor every night. The temperature when the patient was seen was 103° F. and the pulse 130. The above diagnosis was made, and the left mastoid cells were opened and the contents cleared out. The lateral sinus, laid bare, was found to contain pus and breaking-down clot ; this was scraped away until free hæmorrhage took place from the upper end of the sinus, this being plugged with antiseptic wax. The right mastoid was opened and pus and débris removed. The patient recovered and was shown at the meeting.—The paper was discussed by Dr. A. Bronner and Dr. Barrs.—Mr. Walker replied.

The following cases and pathological specimens were shown :—

Dr. SOLLY (Harrogate) : Aneurysm by Anastomosis. (Specimen.)

Dr. T. WARDROP GRIFFITH : Specimens from a fatal case of Perforating Ulcer of the Stomach.

Mr. LITTLEWOOD : Fibro-cystic Tumour of the Uterus removed by Abdominal Hysterectomy (intra-peritoneal treatment of pedicle). (Patient and specimen.)

Dr. TREVELYAN (for Dr. EWING) : Case of Myxœdema.

Dr. GORDON SHARP : Renal Calculi. (Specimens.)

Mr. MAYO ROBSON : Large Gall-stone causing Acute Intestinal Obstruction removed from Ileum by Enterotomy ; recovery. (Specimen.)

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Picric Acid as a Quantitative Test for Sugar in the Urine.—Initial Rashes of Small-pox.—Gunshot Wound of Intestine.—Exhibition of Specimens.

A MEETING of this society was held on Nov. 6th, Dr. S. JOHNSTON, President, in the chair.

Mr. MIALL read a paper advocating the use of Picric Acid as a means of estimating the quantity of Sugar in Urine, and compared the method with the use of Fehling's solution and with the fermentation test.—Drs. Goyder and H. Bronner took part in the discussion.

Dr. EVANS read a paper entitled the "Initial Rashes of Small-pox," a joint production by Mr. A. E. Foster and himself, which was based on an experience of 1055 cases seen by them during the recent small-pox epidemic in Bradford. In only 3·9 per cent. of the cases was an initial rash present. The rashes were of a general or of a partial erythema, in some cases resembling measles and in others scarlet fever. The lower part of the abdomen, the inner surfaces of the thighs, the lateral aspect of the trunk, passing up to the axilla and down the inner surface of the arms, were the typical positions for these rashes. It was also noted that where the initial rash was severe the typical rash of small-pox was slight. With regard to prognosis, the presence of an initial rash was regarded as favourable.—Drs. Johnston, Goyder, Kerr, and Farrell, and Mr. Mercer took part in the discussion, and Dr. Evans replied.

Dr. WOOD described a case of Gunshot Wound of the Intestine which was recently in the Bradford Infirmary under the care of Mr. Roberts. A man having been shot in the abdomen was brought to the infirmary in a state of collapse and with an abdominal wound a little below and to the left of the umbilicus. Four hours after the infliction of the wound ether was given and the abdomen opened by Mr. Roberts. Much blood was found in the peritoneal cavity, the bleeding coming from a vein in the mesentery. Eight perforations were found in the gut and three in the mesentery. These were sutured with silk, Lembert's suture being used. The bullet was discovered and removed, and the peritoneal cavity was irrigated with hot boric lotion and sponged dry. The operation lasted two hours. The bowels acted on the third day and the patient made a good recovery. The gut was empty at the time of receiving the wounds.—Mr. Horrocks and Mr. Mercer took part in the discussion, and Dr. Wood replied.

The following specimens and a patient were brought before the society :—

Dr. WOOD : (1) A Liver with Extensive Lacerations ; (2) a Bladder and Urethra, with complete Transverse Laceration of Urethra.

Mr. HORROCKS : Elephantiasis of Scrotum. (Mr. Horrocks dwelt on the rarity of the condition.)

Dr. KERR : A Patient with a well-marked Bromide Rash.

Drs. MAJOR and S. LODGE : Microscopical Specimens.

Dr. T. C. DENBY : Microscopical and Macroscopical Specimens of a Cysto-sarcoma of the Breast.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Note on a Method of Trephining.—The Treatment of Ununited Fracture by Passive Congestion.

THE first meeting of this society for the session 1894-95 was held on Nov. 7th. The society meets this year again in the hall of the Royal Society of Arts, 117, George-street. Several interesting cases were brought before the society.

Mr. COTTERILL showed a lad the greater part of whose Frontal Bone he had removed for a Growth which was at first supposed to be sarcomatous, but proved after examination to be tuberculous. The great area of brain exposed was protected by a plate of celluloid. A considerable amount of bone had grown from the cut edges.

Mr. ALEXIS THOMSON exhibited two patients on whom he had successfully operated for Traumatic Meningeal Hæmorrhage, the results in both cases being admirable.

Mr. HODSDON showed a man whose larynx he had excised for Epithelioma some months before, and whose speech was distinct and articulate although the vocal cords had been removed.

Mr. CAIRD showed a boy illustrating the effect of Passive Venous Congestion in the Upper Arm, leading to increasing growth of the soft and hard parts.

Dr. G. A. GIBSON exhibited photographs of the sweat from a case of Chylidrosis which had come under his notice, and occurred in a patient with pulmonary phthisis.

Dr. NORMAN WALKER showed a section of Human Skin with a Demodex Folliculorum seen *in situ*.

Dr. BRUCE exhibited and explained a new Sliding Microtome for Cutting under Spirit.

Mr. COTTERILL then read a paper entitled "A Note on a Method of Trephining." It was an elaboration of a contribution he made to the discussion on intracranial surgery which had been held by the society last winter. The method used was the flap method, by which the portion of bone which it is sought to temporarily separate is kept attached by a flap of scalp, so that it can be replaced with a reasonable prospect of its retaining its vitality and becoming again united to the bone from which it was removed. He showed a skull-cap from which a very large circle of bone had been lifted months before death, and in which complete union had taken place. In removing portions of skull it was advisable to saw obliquely inwards, as thereby a beveled edge was left, on which the replaced portion of bone rested, and obviated the difficulty there used to be in preventing the removed portion slipping below the level of the surrounding bone and pressing upon the brain. The method of operating was specially useful for cases in which exploratory operations had to be performed and in which it was desirable to replace the bone.—The several speakers complimented Mr. Cotterill on the value of his work and the skill and care with which he had carried it out.

Mr. CAIRD read a short paper on the Treatment of Ununited Fracture by Passive Congestion. He dealt first with the introduction of this method of treatment and how he had been led to try it. He gave briefly the outstanding points in some cases of ununited fracture of long duration, in which union had resisted all the ordinary measures, and said that union had speedily taken place under this method of passive congestion. The congestion and œdema of the part are brought about by bandaging above and below the seat of fracture. The method, so far as he had yet been able to judge, gave better results in the lower than in the upper limbs.

At the private business it was decided that the first three-quarters of an hour at the ordinary meetings should be devoted to showing patients and specimens. The President (Dr. Clouston) remains in office for another year. Dr. William Craig was elected a Vice-President to fill the vacancy caused by Dr. Muirhead's term of office having expired. Dr. Dow (Danfermline), Dr. William Russell, Dr. Sloan, and Dr. Burn-Murdoch were appointed to the Council in place of those whose term of office had expired. Dr. Mackenzie Johnston (Charlotte-square) was re-elected treasurer. Dr. William Russell resigned the senior secretaryship, and was succeeded by his colleague secretary (Mr. Hodsdon), while Dr. G. A. Gibson (17, Alva-street) was appointed to the vacant secretaryship. Dr. William Craig was re-elected editor of the society's Transactions.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Iron Deposits in Pernicious Anæmia.—Tuberculous Iritis.—Melanotic Tumour of Eye.—Spontaneous Fractures of the Clavicle.

A MEETING of this section was held on Nov. 2nd, Dr. J. A. SCOTT, President, being in the chair.

Dr. SCOTT showed sections of Iron Deposits in Pernicious Anæmia taken from two cases of that disease under the care of Drs. Beatty and Bewley in the Adelaide Hospital. The blood showed considerable variation in the size of the corpuscles and many nucleated corpuscles. In one case the iron was deposited in the outer zone of the hepatic lobules, while the kidney was free from iron in excess; in the other case the iron was only found in the kidney by the Prussian blue reaction, the liver being free.—Mr. FRAZER asked in what form Dr. Scott considered the iron to be present in the specimens exhibited.—Dr. BOYD said he considered the increased hæmogenesis in pernicious anæmia to be due to an increased hæmolysis.—Mr. GRAVES mentioned some cases of pernicious anæmia in which he had demonstrated a good deal of iron to be present in the liver cells.—Dr. SCOTT, in reply, stated that the iron was probably present in the form of an oxide.

Mr. ARTHUR BENSON showed a microscopic section from a case of what appeared to be Tuberculous Iritis. The case had been seen by him in London May last, through the kindness of Mr. Hartridge, and the section was sent to him by Dr. Robert Jones, with a short history of the case—a girl fifteen years of age without definite tuberculous history. She had been troubled with the eye for about nine months, a brown spot on the base of the iris being the first change noticed. Other similar ones followed. The growth consisted of a granulomatous-looking mass (with a few ill-defined giant cells) situated near the base of the iris and blocking the iritic angle. The eye, having become blind, was enucleated.—Mr. STORY related a case of a girl he had seen many years ago with an ulcer on the conjunctiva between the lower lid and the eyeball. This was treated for many months without effect, and finally the eye was enucleated. Microscopic sections showed very fine giant cells. Experts considered the case to be one of tuberculous disease. The girl was now alive and healthy.—Mr. SWANZY said that within the last two years he had seen about four cases of tuberculous iritis. The diagnosis depended upon the presence of small tumours of a cinnamon colour, varying in size from a pin's head to three or four pins' heads, and numbering in an eye from two to ten. Silppling of the back of the cornea and iritis was also present. He had removed one of these growths, and had submitted it to a pathologist for examination, who stated that on microscopic examination it resembled rather a sarcomatous than a tuberculous growth. Later he had the opportunity of showing it to Professor Leber of Heidelberg, who said that, although he could not be positive, he thought it was a tuberculous growth.—Dr. SCOTT remarked on the great difficulty of finding tubercle bacilli in the human tissues, whereas it was quite easy to demonstrate them in those of animals. He said it was no uncommon thing to find at a post-mortem examination evidence of healed-up tuberculous lesions of the lung.—Mr. BENSON briefly replied.

Mr. STORY and Mr. GRAVES communicated the case of a man aged fifty-four years from whose Sclerotic a Melanotic Tumour about the size of a broad bean was removed in February, 1890. In the autumn of the same year a second growth the size of a small pin's head was removed from the conjunctiva of the same eye, and nothing went wrong till the spring of 1893, when the pre-auricular gland began to enlarge. It was removed by Mr. Franks, but new growths developed in the jaw and abdomen, and the patient died in the spring of the present year. The two eyeball tumours were typical specimens of the alveolar sarcoma, exactly resembling Ziegler's illustration in the chapter on Sarcomata of Peculiar Type, showing agglomerated groups of epithelium-like cells separated by well-marked fibrous septa, the pigment cells lying chiefly in the septa. The gland tumour, in addition, exhibited specimens of other types—round-celled, spindle-celled, pigmented, and non-pigmented sarcomata.

Dr. E. H. BENNETT presented specimens of Spontaneous Fractures of the Clavicle, and briefly discussed the question of spontaneous fractures in general.

Reviews and Notices of Books.

Watts' Dictionary of Chemistry. Revised and entirely rewritten by M. M. PATTISON MUIR, M.A., Fellow and Prælector in Chemistry of Gonville and Caius College, Cambridge; and H. FORSTER MORLEY, M.A., D.Sc., Fellow of University College, London, assisted by eminent contributors. In Four Volumes. Vol. IV., with Addenda. London: Longmans, Green, and Co. 1894.

WITH this volume (Vol. IV.) the new edition of the dictionary and standard work of chemistry in the English language, which must be ever associated with the name of the late Mr. Watts, is complete. Mr. Pattison Muir and Dr. Morley are to be congratulated on the able accomplishment of an undertaking the magnitude of which must have greatly exceeded their anticipations some years ago. They owe—and justly acknowledge it—much to the efficient collaboration of a staff of abstractors quite apart from those who have contributed special articles. The whole work, from beginning to end, affords an extraordinary example of the art of compressing facts into the least possible space, and of the excessive use of abbreviations to effect this end. Indeed, so numerous are the abbreviations adopted throughout the dictionary that to some readers, we fear, their use will prove a stumbling-block. It is true, however, that the work of disentangling the meaning of the abbreviations is materially facilitated by a bookmark, which affords a key to the abbreviations and which may easily be shifted from page to page. Still, those whose acquaintance with theoretical chemistry and physical factors is not very deep will experience some difficulty in reading intelligibly many of the paragraphs, and especially those dealing with organic substances. Not that the facts are not there, but that the abbreviations indicating the facts will require some effort to interpret. A single example will illustrate our meaning. The article on quinine opens thus: "QUININE $C_{20}H_{24}N_2O_2$. [173° cor.] (Lenz, *Fr.* 27, 559; Hesse, *A.* 258, 133). The trihydrate melts at 57° (H.). S. ·05 at 15° (Regnauld, *J. Pharm. Chim.* [4] 21, 8). S. (of the trihydrate) ·06 at 15° (Hesse, *B.* 10, 2152); ·06 at 20°, ·11 at 100° (Sestini, *Fr.* 6, 359). S. (of the anhydrous base) ·051 at 15° (H.); ·07 at 20°, ·13 at 100° (S.). S. (ether) 100 at 10° (Hesse, *A.* 135, 327); 4·4 at 18° (van der Burg, *J.* 1865, 438). A conc. ethereal solution often gelatinises, the quinine thus separated being less sol. ether (S. about 5 at 15°). S. (chloroform), 57·5 (Pettenkofer, *J.* 1858, 363). S. (benzene) ·5 at 15°; 3·3 at 80° (Oudemans, *J.* 1874, 867). S. (xylene) ·11 at 15°; ·645 at 138° (Swaving, *R. T. C.* 4, 186) $[\alpha]_D = -166°$ at 15°; -- 162° at 25° in alcoholic solution (Hesse, *A.* 166, 217) = - 145·2 + ·657*p* in a solution of *p* grammes in 100 c.c. of 97p.c. alcohol at 15° (Hesse, *A.* 176, 206; 182, 131)." Again, in a succeeding paragraph on the reaction of quinine we read: "Heated for a long time with 12 pts. of HIAq. SG. 1·96 for three hours at 100° it gives methyl iodide and a yellow salt, $C_{19}H_{22}N_2O_2$3HI [238°] sol. alkalis. Alcoholic NH_3Aq converts it into $C_{19}H_{22}N_2O_2$2HI mixed with a little $C_{19}H_{22}N_2O_2HI$, which yields an oxalate [187°] $(C_{19}H_{22}N_2O_2HI)H_2C_2O_4$ mixed with $(C_{19}H_{22}N_2O_2H_2I_2)_2H_2C_2O_4$ (Schubert a. Skraup, M. 12, 684)." With the story told almost in the language of chemical and physical symbolism in this way it is not surprising to find that when a succession of words does intervene the phraseology is occasionally faulty. Thus, the use of the verb "to be" with "got" in the organic articles is very discordant, and is hardly excusable on the score of economising space, since "got" commonly occurs at the end of a sentence or paragraph where there is space to spare for a more correct word. "When only 1 mol. MeI is used no quinine is got" (p. 376) and "on heating resorcin &c. a blue mass is got" afford examples; but, after all, the dictionary is intended for the use of the scientific and not the technical or general chemist or reader, and it is difficult to imagine how more information—such as is contained in the paragraphs noticed—could be crammed into smaller compass. On this account, probably, the general reader may be led to prefer the plan of the old edition of Watts; but it must be remembered that chemistry has advanced so enormously since that admirable work was published that the separation of the dictionary into two sections—the present confined to theory, and Thorpe's (which is its companion) to applied chemistry—was inevitable. Taken together, we doubt if a better or more complete history of the science exists in any language.

Of the special articles in Vol. IV. (Ph to Z) we may refer to the admirable dissertation of Professor Halliburton on Proteids; to the excellent account of the Terpenes, with the new classification suggested by Wallach, by Professor Tilden; to the very comprehensive article by C. O'Sullivan, F.R.S.—than whom there is no greater authority—on the Starches and Sugars; to the contribution on Photographic Chemistry, including the latest views of the chemistry of development, by R. Meldola, F.R.S.; to the classical essays on the Theory of Solution by Dr. Arrhenius of Stockholm and Spencer Pickering, F.R.S.; and last, but by no means least, to the admirable series of articles on the vitally important subject of Physical Methods used in Chemistry contributed by such eminent authorities as J. W. Capstick, D.Sc., M.A. (methods based on capillarity and viscosity of liquids), G. Gladstone (optical methods, refraction, and dispersion), W. N. Hartley, F.R.S. (optical methods, spectroscopy), and Professor Ostwald, Ph.D. (electrical methods). Of the unsigned articles by Dr. Morley those on Urea and the Ptomaines are examples of interest to medical readers. Mr. Pattison Muir's contributions on the Chemistry of the Metallic and Non-metallic Elements really embody a series of admirably written essays which afford very interesting and instructive reading, being written close up to the results of recent investigation. The same may be said of the addenda, which contain "brief accounts of the chief work done in descriptive inorganic chemistry since the publication of Vols. I., II., and III., and the printing off the final proofs of Vol. IV." They are, however, necessarily terse, but in many instances the references bear the date 1894, and in one paragraph reference is made to such recent work as that of Mr. Brereton Baker on the Influence of Moisture on Chemical Action.[1] In regard to nomenclature we venture to point out one small inconsistency due to Mr. Muir. To most readers the adoption of seleni*on* instead of seleni*um* will be new; but, as Mr. Muir says, "as Se is distinctly a non-metallic element, and as the termination *um* is characteristic of the names of metals, it seems altogether improper to use the name selenium rather than selenion." Further on, however, we read that "Se resembles sulphur and tellurium in its chemical character; it is somewhat less negative than sulphur, and more negative than tellurium," but on referring to the article on tellurium we find no suggestion to name it tellurion in accordance with the above rule, although in a succeeding paragraph we read that "the chemical properties of tellurium show that it belongs to the same group as sulphur and selenium."

Watts' dictionary is the English cyclopædia of chemical science, and those whose studies and occupation relate to chemistry—medical men, physicists, chemists, and others—will hardly require telling that the possession of the new issue, so ably edited by Mr. Muir and Dr. Morley, and now complete by the recent publication of Volume IV., is a *sine quâ non* if they would be conversant with the present position of chemical knowledge—a knowledge which has been very considerably extended by the fruitful investigations of the last decade.

[1] Vide THE LANCET, June 9th, 1894.

The Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M.D., F.R.C.P. Lond., Professor of Materia Medica and Therapeutics, University College; Physician and Professor of Clinical Medicine, University College Hospital. Ninth Edition. London: H. K. Lewis. 1894.

THE fact of a text-book having reached its ninth edition is of itself sufficient evidence that little is required from the reviewer. Dr. Roberts's "Theory and Practice of Medicine" is so well known and has been so long deservedly appreciated both by students and practitioners of medicine that no words of ours are necessary to increase its popularity. It is an admitted fact, no doubt in some way to be regretted, that a medical student bases his judgment of a book according to how much it will help him in his examinations, whilst the busy practitioner wishes for a volume in which he can with the least expenditure of time and trouble obtain the information which he at the moment requires to assist him in the management of a difficult and trying case. From both these points of view there is no more suitable book on general medicine than Dr. Roberts's. The present edition has been brought fully up to date, and at the rate that medical science is now progressing, with new theories and startling announcements of new therapeutic measures, this means no little labour in sifting from the mass of recent literature that which is reliable and likely to stand the test of time. Especial advance has been made in bacteriology, and Dr. Roberts, with characteristic thoroughness, has incorporated all the best work which has been accomplished in this branch of medicine. For an example of the author's complete grasp of such subjects we would especially refer to the section on the Etiology of Diphtheria, where a concise but complete summary of the Klebs-Löffler bacillus and its products is given. Another new feature of this edition comprises sections dealing with the general therapeutics of the principal systems and organs of the body, intended as a preliminary introduction to the study of the symptoms and diseases belonging to each. These sections are admirably drawn up, and each is divided into three divisions: (1) Therapeutic Groups; (2) Methods of Administration; and (3) Auxiliary Therapeutic Agents. An immense amount of information is thus offered in a small compass, and the student will do well to devote careful study to them before proceeding to the treatment of individual complaints. Equally good are the sections on the General Diagnosis, Prognosis, and Treatment of the Different Systems and Organs. Such summaries are very useful, especially to students, as a means of testing and refreshing their memory of what they have read. The general arrangement of the work remains as before except in some minor respects. We need say no more than that we trust this edition of Dr. Roberts's work will meet with as much success and be found as useful to its readers as its predecessors have been.

Dissections Illustrated: a Graphic Handbook for Students of Human Anatomy. By C. GORDON BRODIE, F.R.C.S. Eng., late Senior Demonstrator of Anatomy, Middlesex Hospital Medical School; Assistant Surgeon, North-West London Hospital. Part II., the Lower Limb; Part III., the Head, Neck, and Thorax. London and New York: Whittaker and Co. 1894.

AN accurate and extended knowledge of human anatomy lies at the foundation of the elaborate structure of medical science. Long-continued and assiduous practice in the dissecting room is the only means of attaining proficiency, and the training of the hands and eyes, inseparable from dissection, should be supplemented by diligent reading. Anatomy, post-mortem examinations, and operative surgery (on the dead body) are matters to which the student ought to give especial attention, keeping in mind that the opportunities freely available during his educational period will to most men engaged in practice occur but rarely. Lapse of time causes the recollection of anatomical details and morbid appearances to be seriously dimmed, and ultimately many facts, which might have been retained by an occasional brief review, pass out of mind altogether. Practical knowledge of anatomical structure once acquired may, however, be fairly well preserved by a moderate amount of reading, at intervals not too long, with constant reference to a few osteological specimens and to well-executed drawings of parts as they appear in nature. This last requisite is admirably supplied by Mr. Brodie's series of plates, which satisfy every requirement both for the home-reading of the student and for occasional reference during the leisure of the busy practitioner. Part II. contains five views of the thigh, three of the gluteal muscles, one each of the sacral plexus, hamstrings, adductor magnus, front and back of the leg, and dorsum of the foot, two of the popliteal space, and four of the sole of the foot. In addition to these twenty coloured plates there are six diagrams. Part III. deals with the more complicated regions of the head, neck, and thorax, and merits somewhat more extended notice. Of the neck there are five views, of the face one, and of the pterygoid region four, all these being two-thirds of the natural size. Of the base of the skull there are two views, of natural size, and a vertical section of the head, two-thirds of the natural size. There are two views of the pharynx and three of the larynx, all of the natural size. The volume closes with three views of the adult thorax and one of the fœtal. Each plate is accompanied by a brief description, and the names of the several organs and structures are conveniently placed on the page opposite the drawing. There are also diagrams showing the cervical plexus, the superficial veins of the neck, the parts covered by the sterno-mastoid muscle, the posterior primary branches of the upper cervical nerves, the cutaneous nerves of the head and neck, the usual course of the lateral sinus traced on the exterior of the skull, the connexions of the nerves with each other and the sympathetic as they leave the skull, and, finally, the surface marking of the thoracic viscera. The four successive views of the pterygoid region are good examples of diagrammatic delineation. In the first, the zygomatic arch being detached and turned downwards along with the masseter, and the sterno-mastoid removed, the temporal muscle is fully exposed, and the platysma and buccinator in great part are shown, together with the facial, inferior labial, and temporal arteries, the facial nerve, and buccal branch of the fifth. Posteriorly the complexus, trachelo-mastoid, splenius, and digastric muscles are shown; also the facial, temporal, and alveolar arteries, the internal jugular vein, lateral sinus (laid open), the facial, spinal accessory, and second cervical nerves. For the second view the coronoid process is cut through and turned upward with the temporal muscle, and the ramus of the jaw is removed. The additional structures thereby disclosed are principally vascular and nervous—the external carotid, internal maxillary, inferior dental, the occipital arteries, the internal jugular vein, the lingual nerve, the inferior dental and branches, branches of the third division of the fifth, and the hypoglossal. For the third view the condyle of the jaw and the external pterygoid muscle have been pulled forward to expose the third division of the fifth nerve, and the orbit is laid open, revealing the ocular muscles. Several additional muscles connected with the styloid process and the hyoid bone are now shown, the common and internal carotid arteries, the pneumogastric, descendens noni, and many other nerves. The fourth or deep view extends from the orbit to the first rib, over which the subclavian artery and the cords of the brachial plexus pass. The jaw is entirely removed, and the structures shown are so numerous that the names occupy a page and a half.

The execution of the plates, both as to detail and colouring, is very good, and the size of the page—about eleven

inches by eight—makes the volumes convenient for reference and portable.

Injuries and Diseases of the Jaws. By CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, and Surgeon to University College Hospital. Fourth Edition, with numerous Wood Engravings. Edited by HENRY PERCY DEAN, M.S., F.R.C.S., Assistant Surgeon to the London Hospital, and Surgeon to the North-Eastern Hospital for Children. London: J. & A. Churchill. 1894.

IT is twenty-seven years since Mr. Heath obtained the Jacksonian Prize for his essay on Injuries and Diseases of the Jaws, and it still remains the standard work in the English language on this subject. To each new edition valuable additions have been made, and in the case of none has this been more conspicuous than in the one before us. Mr. Heath has incorporated in this edition "the experience of another ten years of active professional life," and on the clinical side has brought it thoroughly up to date. But since this work was first published a great advance has been made in our knowledge of pathology, and Mr. Heath has therefore availed himself of the able help of Mr. Dean in this department. To graft modern pathological views on an old work is a difficult task, and we can well believe that Mr. Dean would have found it easier to rewrite and reclassify the whole; but he has performed his part admirably, and this edition will sustain at all points the high position Mr. Heath's essay has always held in surgical literature. Tumours of the palate are described more fully than was possible before, and much that is new has been introduced into the chapters dealing with cysts in the jaws and odontomata. A careful description of the development of the teeth has been added to the chapter on Cysts—and wisely, as a knowledge of the details of the physiological process throws great light on the pathological process. A good deal of rearrangement of matter will be found also in the sections dealing with malignant tumours of the jaws. Electric illumination as a means of diagnosis of diseases of the antrum, of course, finds a place. We congratulate Mr. Heath and Mr. Dean on the success with which they have prepared the fourth edition of this well-known and highly esteemed work.

Analytical Records
FROM
THE LANCET LABORATORY.

TÖNNISSTEINER, A NATURAL SPARKLING MINERAL WATER
(THE TÖNNISSTEINER CO., 69, LAVENDER SWEEP, S.W.)

TÖNNISSTEINER is an agreeably sparkling table water drawn from the Tönnissteiner "Brunnen" at Brohl on the Rhine. It contains per litre 4·8 grammes of mineral salts, chief amongst which are bicarbonate of sodium (2·35 grammes, or the equivalent of 1·5 grammes of sodium carbonate), magnesium, and common salt (3·8 grammes). Like most mineral waters of its class it further contains distinct traces of rarer constituents, such as the salts of lithium and the iodide and bromide of sodium. The water is of excellent organic quality, and, though highly aerated, is agreeably smooth as well as saline to the taste.

PURE WINE VINEGAR.
(GIRLING BROTHERS AND CO., OLIVER'S-YARD, 55A, CITY-ROAD, E.C.)

It is satisfactory to report that the statements advanced in regard to this vinegar are perfectly correct. The distinctive features in the composition of vinegar made from wine should be, of course, the presence of tartaric acid and the practical absence of phosphates (which in ordinary genuine vinegar are derived from the grain or malt). As a matter of fact, tartaric acid was found to occur in the above specimen in important quantity, while the liquid did not respond definitely to the tests for phosphoric acid. On analysis the following results were obtained: acetic acid, 7·09 per cent.; extractives, 2·80 per cent.; mineral constituents, 0·55 per cent. The vinegar possesses a fragrant ethereal smell and is free from the common impurities of ordinary vinegar. It is important to record also that a minute search for injurious metals was fruitless. We regard it, therefore, as a wholesome product, and one which may be recommended for all culinary purposes.

PEPTIC MEAL GERM IDEAL BREAD.
(J. T. O'CALLAGHAN, 91, MAYES-ROAD, WOOD-GREEN, N.)

The nature of this specimen of bread is fairly well conveyed by the somewhat cumbersome name given to it. The meal of which it is composed is prepared in the following manner. The wheat, after being cleaned, is first soaked in lime water and then in a solution of sugar-candy, and finally in a little bicarbonate of potash. Before the wheat sprouts it is submitted to a heat of 215° F. until it is brittle and attains an agreeable nutty smell. The germ is treated with lime water in order to neutralise, as it is stated, the bitter of the germ. It is next dried until it becomes crisp. The wheat and germ are then ground together and mixed with fine flour in the proportion of six of the former to ten of the latter. The specimen of bread submitted to us was of excellent flavour, smell, and texture, and possessed additional nutritive qualities owing to the presence of carefully treated wheat germ. The fine nutty smell, coupled with its property of keeping moist for some time, are qualities which conduce considerably to the enjoyment of this important article of diet, qualities of which ordinary white bread is often so wofully destitute.

ELIZABETH SPRING WATER.
(LONDON AGENCY, ST. PETER'S HOUSE, 142, CLERKENWELL-ROAD, E.C.)

This water has already been reported upon in our columns, on which occasion, however, we had to point out that from some cause (bad bottling or inefficient corking) many of the samples we examined had parted with their gas. We have no fault to find in this respect with samples recently submitted to us. The water is a satisfactory representative of the alkaline carbonated group, and is drawn from the Elizabeth springs (Benedictine Abbey, Maria Laach).

"HÆMOFERRUM" (STEARNS').
(FREDERICK STEARNS AND CO., DETROIT, MICHIGAN; THOS. CHRISTY AND CO., 25, LIME-STREET, E.C.)

"Hæmoferrum" pilloids consist of a rust coloured powder enclosed in a transparent soluble shell. The powder is stated to be prepared by a similar process suggested by Professor Foster for the preparation of hæmoglobin, in which the serum is separated from the corpuscles, and the latter broken up by suitable reagents and evaporated *in vacuo*. The residue so obtained contains, of course, the hæmoglobin, of which hæmoferrum is largely composed. Thus on shaking up the contents of a hæmoferrum pilloid with cold water a froth is produced like that of dilute blood similarly treated, and the resulting solution when clarified exhibits the well-known absorption spectrum of fresh blood, fails to respond to the ordinary iron tests and gives evidence of proteid compounds according to the biuret test. On adding a drop of ammonium sulphide (a reducing agent) to the solution placed in front of the spectroscope, the absorption bands become more intense, and finally merge into one broad shading—a phenomenon characteristic of pure fresh blood treated in the same way. The quantity of iron present was found by a colorimetric process to be almost exactly 0·5 per cent.—an amount identical with that contained in hæmoglobin. The introduction of this interesting and skilfully made preparation places in the hands of the physician a probably effective

means of administering iron in anæmia or in other cases of blood impoverishment.

"SOY" BISCUITS, BREAD, AND FLOUR FOR DIABETICS.
(CALLARD AND CO., 65, REGENT-STREET, W.)

It will hardly be believed that these specimens of biscuits and bread are not made with the ordinary starch-containing flours, so satisfactory are the flavour and texture of both preparations. Yet even the delicate resources of chemical and microscopic tests fail to show the presence of any appreciable quantity of sugar or of the presence of starch cells. The specimen of flour is excellent, and while it contains nothing which is objectionable to the diabetic, it may be made into a pudding which is really palatable. In a word, these preparations enable the practitioner to administer to diabetic patients a food that is suited to their requirements while it is acceptable to the taste.

VARIOUS SOAPS.
(CHRISTOPHER THOMAS AND BROTHERS, LIMITED, BROAD PLAIN SOAP WORKS, BRISTOL.)

Amongst the soaps manufactured by this firm we have examined (1) pure carbolic soap, (2) finest olive oil soap, and (3) ordinary olive soap. No. 1 contains carbolic acid, of the purity of which we are satisfied, but further tests showed the presence of a trifling quantity of free alkali. No. 2 proved an excellent specimen of soap, being highly desiccated and perfectly free from excess of alkali. So well dried is it that it is not so easily, and we may add extravagantly, soluble as is the case with many, and especially transparent, soaps. No. 3 is a well-made article suitable for household purposes.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

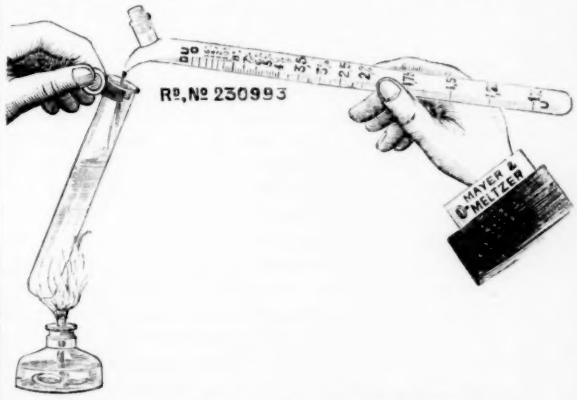
A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held on Wednesday, Oct. 31st, at 25, Grosvenor-street, W., Mr. T. Holmes, Vice-President, in the chair. The hon. secretary, Mr. Percy Dunn, reported that, in accordance with the instructions of the Committee, he had called on Mr. Herbert Page, the President of the Executive Council of the Society of Fellows, and had made a proposal for a joint subcommittee of the two societies to consider what steps should be taken in reference to the mode of election of the President of the Royal College of Surgeons of England and other matters of interest to the Fellows with regard to which the two societies might be in agreement. Mr. Herbert Page had undertaken to consult the Executive Council on the subjects under discussion. Since then he (Mr. Dunn) had received a letter from Mr. Wallis, the honorary secretary to the Society of Fellows, to the effect that the Executive Council agreed to a conference, and had nominated four of their members as a subcommittee to meet a similar subcommittee of the Association of Fellows at such time and place as might be convenient to the members of the subcommittee of the Association. This communication led to the appointment of a subcommittee, and it was agreed to propose Wednesday, Nov. 7th, at 5 P.M., as the date of meeting at Mr. Holmes' residence in Great Cumberland-place. The resolution drafted at the last meeting for the annual general meeting of Fellows and Members, but left over for further consideration, was then discussed, and it was unanimously decided, in view of the conference with the Society of Fellows, not to send it in to the Secretary of the College. It was considered expedient to defer further action for the present. It was agreed, however, that if no notice of motion had been sent in to the College expressing the thanks of the Fellows and Members for the annual report, and in support of the proposed amendment of By-laws IV. and XVI., a resolution to this effect should be moved by Mr. Holmes on behalf of the Association.

At the termination of the meeting of the committee a meeting of the subcommittee appointed to meet the subcommittee of the Society of Fellows was held to determine the special matters which it would be desirable to bring before the joint meeting. We understand that the subcommittees of the two societies held a meeting on Nov. 7th, when certain matters of collegiate interest were brought forward and were remitted for the consideration of the Executive Council of the Society of Fellows, by whom they will be discussed in due course.

New Inventions.

APPARATUS FOR THE RAPID ESTIMATION OF SUGAR IN URINE.

To all members of our profession the estimation of sugar in urine is a matter of importance; but the busy practitioner seldom finds time to ascertain even the approximate quantity of sugar in urine, and he is often compelled to accept merely the evidence, positive or negative, furnished by a simple qualitative test. With handy apparatus such as that about to be described, however, the estimation of sugar should be no more difficult or tedious to execute than the mere detection of its presence. The apparatus referred to, which was designed by Mr. T. Carwardine and is made by Messrs. Mayer and Meltzer of 71, Great Portland-street, W., involves no newly known method, the quantity of the sugar being determined by its reducing power on an alkaline solution of copper. It consists of a measuring tube, as seen in the accompanying illustration, which chemists will probably



recognise as a modified form of Bink's burette, and which is to contain the urine diluted according to given directions. A definite quantity of Fehling's solution is placed in the large test-tube and diluted and gently boiled while the weak urine in the measuring tube is gradually added, the flow of liquid issuing from the jet being controlled by the forefinger pressing on the cup-shaped aperture. This tube is so graduated as to give at once, when the quantities of urine and reagent are such as are directed to be used, the percentage of sugar without calculation. We have tried this apparatus in THE LANCET Laboratory, working with a solution containing a known quantity of pure grape sugar, and the results obtained were very near the truth—in fact, within a decimal part per cent. While we grant that this is satisfactory, we think it would be better to substitute the modified Fehling solution suggested by Dr. Pavy, which consists practically in adding ammonia to the alkaline copper solution, so that 10 volumes of ammoniated Fehling solution contain 1 volume of original Fehling solution. The Pavy-Fehling solution offers the distinct advantage of enabling the transition of colour to be seen much more plainly, since the cuprous oxide is dissolved in the excess of ammonia to a colourless solution as fast as it is formed; so that, instead of watching for the disappearance of blue in the presence of a bright red precipitate, the urine is allowed to drop in until the blue solution just changes to a clear colourless liquid. Moreover, the solution may be recovered by bubbling an excess of air through it after cooling, when, if the proper quantity of urine has been run in, the blue colour instantly reappears, until its original intensity is restored. The apparatus would answer equally well with this process, but of course the quantity of reagent would have to be increased, or else the urine would have to be further diluted.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 17, 1894.

THE APPROACHING MEETING OF THE GENERAL MEDICAL COUNCIL.

AT the meeting of the General Medical Council which will begin on the 27th inst. not a few subjects of general interest to the profession are likely to be discussed. The programme of business is not yet issued, and must be still incomplete, but it is always possible to forecast some of the principal topics of debate by referring to the *remanet* of the last meeting and to matters which have been distinctly relegated to this. The line of demarcation by which it was sought to confine the May meeting strictly to the consideration of questions of medical education, and the November meeting to questions affecting the discipline of the profession and the purity of the Register, has long been shown to be impracticable. At the last meeting in May a large number of cases of alleged professional misconduct claimed the attention of the Council, as well as the reports of the Education and Examination Committees and the reports of the Inspector and Visitors of Examinations. So large was the amount of business to be done under these heads that the Council sat six days. There is little reason to hope that it will be otherwise at the approaching meeting.

Our readers may remember that in May the examinations of certain important bodies had still to be visited and reported on—viz., those of the English Corporations and the Scottish Universities. It is through one or other of these portals that the majority find their way into the profession, so that it is of vital importance to learn the ease or difficulty with which it is done. These inspections and visitations cost a great deal of money. Last year they cost the sum of £540 15*s*. But if the criticism is good and impartial it is money well spent and will tend to fairness towards the candidates and between the different bodies. In December last also the Council resolved that the examinations for diplomas in State Medicine should be visited, and Dr. DUFFEY was instructed to inspect at least half of them in the year 1894. Possibly his reports on some of these examinations may be ready for consideration at the approaching meeting. We may assume, therefore, that in accordance with the plan of the Council all the final examinations of the country will have been visited and reported on by the forthcoming session. It will be a serious question then for the Council to consider whether the examinations shall continue to be inspected, or whether the earlier examinations of the curriculum should be reported on in the next series of inspections, or whether any interval of rest should be allowed to the bodies.

There are several questions connected with the construction to be put on a five years' curriculum which are likely to occupy a considerable amount of time. The ordinances of the Scottish Commissioners, in many respects highly creditable to them and likely to improve and elevate the standard of graduation in Scotland, are still far from meeting the views of the Council as regards the period at which, and the institutions in which, the study of elementary biology, chemistry, and physics may be pursued. The Education Committee at the last meeting of the Council was also charged to examine this same question in connexion with the recognition by the Conjoint Board of England of teaching in science in certain public schools. Doubtless, this subject will reappear in the programme of the coming meeting, affecting deeply as it does alike the period of preliminary education and that of professional work. It cannot be denied that at some schools science is better taught than at some medical schools; but the question is a general one and of immense importance when so regarded.

At the last meeting of the Council, on the motion of Sir WILLIAM TURNER and Mr. BRUDENELL CARTER, certain bodies were warned against the system of giving to women documents purporting to be diplomas and empowering them to practise as midwives and to use the title. There is reason to think that this resolution has been inoperative, and doubtless some members of the Council will think it their duty to ascertain whether this be so or not; and, if so, whether, and what, further steps the Council ought to take to vindicate its authority in the matter. It may be anticipated that reports will be submitted to the Council on the efficiency or otherwise of the Conjoint Examinations of the Royal College of Surgeons and the Apothecaries' Hall of Ireland. At the last meeting certain members were in favour of at once reporting their inefficiency to the Privy Council. But the majority were in favour of a period of grace, and it was announced by the representatives of the respective bodies on the Council that everything would be done in the interval between the sessions to bring the examinations up to the standard of the wishes of the Council. In this interval we believe the Inspector and Visitors have visited each examination, and their report will be awaited with interest. One other question touching the Royal College of Surgeons in Ireland has to be disposed of at the approaching meeting—viz., their regulations as to the course of study to be gone through for the licence in Dentistry. These regulations had not, up to May last, included a compliance with the requirements of the Council in the matter of "three years' instruction in mechanical dentistry from a registered dental practitioner," and a resolution was passed threatening report to the Privy Council unless such requirements were complied with at once.

The constant accounts of false certificates of death and of the unwarranted use of unqualified assistants will prepare our readers for charges of this kind. A still more important question arises as to the duty of the Council in cases where they have adjudicated and ordered the removal of names from the Register. It is too common to find in such cases that the person so removed from the Register continues to practise as before, and even to use all his professional titles of which he may have been deprived, implying registration. This evil is a very great one, and was referred at the last meeting for the consideration of the lawyers of the Council. The profession will look confidently for the suggestion of some remedy for an evil which places both the Council and the medical authorities in an undignified position and which gravely affects the public. We have said enough to show

that the General Medical Council is likely to have its hands full at the approaching meeting.

THE attitude adopted by certain members of the Town Council of Newport, in the Isle of Wight, in an interview with Dr. THEODORE THOMSON of the Local Government Board, can hardly be too greatly deprecated. Dr. THOMSON began at the interview in question by urging the council to arrange with the medical practitioners of the borough to notify their cases of typhoid fever, so that the sanitary authority and their officers should have the materials at hand which would enable them both to learn definitely what was the cause of the existing prevalence of that disease and to take the necessary remedial action on premises affected. In short, as Dr. THOMSON pithily put it, the Town Council had hitherto been "heavily handicapped" by insufficient information, and had been "playing a game of blindman's buff with typhoid fever, a game which was not likely to be conducive to the welfare of the inhabitants." He also advised them that until sufficient material was available for the formation of a judgment as to the cause of the disease the inhabitants had better boil their water and their milk, and that the authorities should adopt all general measures of sanitation possible. It would appear that a public notice urging the boiling of potable water had been issued; but that, chemical analysis having shown that, according to such process, all the samples "were pure and of good quality," this statement had also been published, the Mayor, however, adding to the latter notice a request that the inhabitants should still continue to boil their milk and water. This attitude was doubtless adopted in view of the explanations afforded by Dr. THOMSON to the effect that, valuable as chemical examination of water is, it cannot be relied on to prove the absence of an infectious quality in water. Instances were given as to this, and the case of Worthing was especially cited in this connexion.

An extraordinary speech was then made by the Chairman of the Sanitary Committee, who, admitting that typhoid fever had been in progress since May last and that up to the present date the cause remained undiscovered, appeared to speak in deep resentment of the Local Government Board having sent an inspector to help them in staying this serious and fatal outbreak. To quote the local report, "he pitied the town cursed by the visit of a Local Government Board representative," and he then proceeded to assail the medical practitioners as a body, all the while contending that in acting as he did he had regard to the welfare of the town. It is true that one member of the council tendered an apology for the statements of his colleague; and that others, including the Mayor, expressed the desire that everything should be done which would strengthen the hands of those engaged in the investigation of the causes of the fever. But it is pretty evident that there are on the council those who very much resent the fact that Dr. THOMSON has been sent down to aid them by his advice.

Taking that advice together with other statements made at the council meeting, it must be held that, provisionally at least, the water-supply of Newport, or some part of it, has come under suspicion in connexion with the prevalent fever. It is also evident that, in the minds of some, the present system of sewer ventilation, which it is alleged is that sanctioned by the Local Government Board, causes nuisance and may have a share—great or small—in the extension of the fever. And, lastly, it must be more than evident that the sanitary administration of Newport is, and has been, defective, and that the keen resentment shown by some who should, of all others, hail with favour the effort to find out a cause of disease and death which has escaped local discovery for some six months at least, is a feature deeply to be deplored. It is also a feature that is certain to be remembered by those who find Newport so convenient a centre from which to visit the many charming spots which lie within easy reach of that town. We trust, however, that the blot on the sanitary history of the town which has been caused by this maintained prevalence of fever may soon be wiped away as the result of the discovery of the cause of the mischief which is still in progress, and that the regrettable attitude assumed by some—happily, a minority—having seats on the local sanitary board may no longer be maintained.

THE weather during the three months ending with September last was remarkable for low temperature, frequent rainfall, and absence of sunshine. There may indeed be said to have been no summer in 1894, but, judged by the Registrar-General's quarterly return for the three months under notice, this conspicuous deficiency of temperature and sunshine would appear to have had a favourable effect upon the public health. It is reported that the annual death-rate during the three months did not exceed 14·2 per 1000 and was considerably below the rate recorded in the summer quarter of any year since civil registration was established in 1837. The rate was no less than 3·0 per 1000 below the average rate in the ten preceding corresponding quarters, in only three of which years the summer rate fell below 16 per 1000. Last quarter was the first time since 1837 that the death-rate of England and Wales in the summer quarter has fallen below 15 per 1000. The unprecedentedly low death-rate last summer may to a great extent be safely attributed to the average low temperature and frequent rainfall that marked the weather during the quarter. In the rather more than twenty millions of urban population the death-rate last quarter was 14·9; while in the remaining, and chiefly rural, population of nearly ten millions the rate was only 12·7. The urban rate was 3·7 and the rural rate was 2·2 per 1000 below the mean rates in the ten preceding summer quarters. Thus, in equal numbers living, the urban deaths last quarter were as 117 to 100 in the rural districts, the mean proportion in the two preceding corresponding quarters having been 125 to 100. Hence the reduction in the death-rate was relatively far greater in the urban than in the rural population. It is noteworthy, however, that although the reduction in the death-rate was greatest in the case of infants it was very little smaller at other ages. The death-rate among infants under one year of age was 19 per cent. below the average; among the children and adults aged between one year and sixty years the deficiency was 15 per cent., and among persons aged upwards of sixty years it was 13 per cent. The death-rate from the principal zymotic diseases was very considerably below the

average. With the exception of diphtheria the mortality from each of these zymotic diseases was unusually low; the decrease of mortality was, however, by far most marked in that from diarrhœa, due naturally to the low summer temperature and frequent rain. The fatality of diarrhœa, indeed, was less than half the average summer fatality. Summer diarrhœa is especially an urban disease, thus accounting for the larger saving of life last quarter in our large towns. The diarrhœa death-rate last quarter in the largest towns, although so markedly below the average, showed the usual wide variations in the several towns, variations which have never yet been satisfactorily explained. While the annual death-rate from diarrhœa last quarter was 0·05 per 1000 in Halifax and 0·25 in Huddersfield and Swansea, it was equal to 3·10 in Liverpool, 3·32 in Leicester, and 4·46 in Preston. The main features of these variations are practically constant, for infantile diarrhœa may be said to be scarcely a fatal disease in the Yorkshire manufacturing towns, while it has during a long series of years shown persistent excess in Leicester and in most of the Lancashire manufacturing towns. It is satisfactory to note, in conclusion, that, while the unprecedentedly low death-rate in England and Wales last quarter was in great measure due to the unseasonable characteristics of the past summer, the low rate of mortality affords convincing proof of the generally favourable condition of the public health. The death-rate in England and Wales in 1894, judged by the published returns for the first three quarters, will undoubtedly "break the record" and be very considerably below the rate in any year since the commencement of civil registration. It now appears to be more than probable that the average death-rate in the whole of England and Wales in 1894 will be below 17·0 per 1000, the lowest rate hitherto recorded being 18·1 in 1888. Such a death-rate may justly be claimed as a triumph for our constantly progressing system of sanitary legislation and organisation.

Annotations.

"Ne quid nimis."

THE TREATMENT OF DIPHTHERIA.

THE appeal made by Sir Joseph Lister in the columns of the public press for funds to facilitate the supply of antitoxin has already met with substantial support, no less a sum than £830 having at this time been subscribed. We hope that subscriptions will continue to come in, and have a particular reason for accentuating this sentiment—viz., that our remarks upon the commercial naïveté of the appeal have been tortured into an expression of antagonism towards the appeal and towards the British Institute of Preventive Medicine. Our attitude towards the Institute is surely well known to all our readers, and it would not be becoming in us to dwell upon the reasons that the promoters should have for believing us to be thoroughly at one with them in their magnificent scheme. With regard to the manufacture and distribution of antitoxin serum we have considered that the appeal for public subscriptions, as well as the allaying of much wild talk, would be best served by placing before our readers some definite information on the subject of the manufacture of the fluid. This we do on p. 1173, in an able article by Dr. Turner, the medical officer of health of the Leicester and Rutland Districts, to whom we were able to give introductions which have enabled him to report to us and to his sanitary authority in a practical manner upon the point. That the production of the remedy is necessarily expensive, requiring costly plant and highly skilled operators, will be seen at once. That an early start must be made in England if we are to have a stock ready in a comparatively short time will also be evident from the fact that the fluid takes more than three months to prepare. In the Pasteur Institute the time is four months. There is just now no fluid available in Paris, and practically none elsewhere. There are horses in various stages of immunity both in Paris and in London, but the supply of perfected fluid has been exhausted. What is required is money, and in considerable quantity, £2000 being probably the minimum, to enable the British Institute of Public Health to purchase the horses and continue the immunising process. All the money in the world cannot buy the fluid. We lay stress on this point, as we have received numerous communications in which the writers beg us to state that the Local Government Board ought to provide the fluid. The Government Department cannot hurry the pathological process; and the British Institute of Public Health can only be placed in a position to supply the fluid by obtaining the funds necessary for organising its manufacture. If the answer to Sir Joseph Lister's appeal should be so spontaneously generous as to enable the Institute to give back to the public what the public money has enabled the Institute to provide—why, surely, not only so much the better but so much the more logical.

THE "NEW STREET DANGER" AGAIN.

THE electrical accident which recently occurred in the City resembles in many respects that which took place some time ago in Bournemouth, and which was commented upon under the above heading in THE LANCET of Feb. 10th. On Saturday last a horse attached to a brougham was being driven along Cannon-street when on turning a corner the animal began to tremble violently, fell down, and died in a few minutes. The driver on getting down from his seat received a violent shock, but was not further injured, and those who approached the spot to render assistance received shocks of more or less violence. Explosions occurred simultaneously in the Electric Lighting Company's "junction boxes," the lids being blown off and the brick and iron work of one of them injured. "A portion of the footway and kerbstone was blown into the carriage way," striking and injuring two persons. A third person, on being taken to St. Bartholomew's Hospital, was found to be suffering from "shock caused by the explosion"; another of the injured was taken to Guy's Hospital, and it is stated that he was found to be suffering "from slight paralysis of the left leg owing to the shock." The death of the horse and the electric shocks received by persons in the vicinity were clearly due to a leakage current circuit being completed through their bodies. The horse was killed, not because that animal is specially susceptible to electric currents, but because of the excellent "metal contact" made by his shod and nail-pierced hoof, as well as for the additional reason that a horse, covering as it does more ground than a man, is therefore, under such circumstances as those under consideration, subjected to a relatively greater difference of potential. The cause of such leakage is to be sought in faulty insulation, or perhaps in what is known mechanically as "a bad joint." Prevention, therefore, obviously consists in an efficient insulation. A further preventive measure, however, less obvious but of great importance, is to be found in the use of what is known as a "concentric cable," the outer conductor of which is "earthed," and the whole enclosed in a well-earthed metal case. Inasmuch as such a cable

consists of an inner conductor having a maximum potential to earth surrounded by an outer conductor whose potential is almost the same as that of the earth, it follows that before the inner conductor can make contact with the earth, and thus cause this serious rise of potential, it must first make contact with the outer "earthed" conductor, a short circuit being the inevitable result, involving the destruction of the safety fuse and the breaking of the circuit. With such a cable, insulation being perfect and "earthing" effectually carried out, an accident of the kind under consideration could scarcely occur. As the "earthing" is effected at the central station, inspection is at all times easy, and arrangements ought to exist for it being rigorously carried out. A different condition of things has to be considered in those accidents which are brought about by gas leakage coming into contact with a spark. If the spark be an electrical one it is owing to defective insulation and a "bad contact." Such a risk is minimised by the electrical arrangements above detailed. But, assuming that it is hopeless to get rid of gas leakage, other suitable precautions would consist in an efficient ventilation of conduits, perhaps in an attempt at making such conduits gas-tight, but above all, as already pointed out in THE LANCET, in an efficient inspection of the entire system. Have steps been taken to give effect to the recommendations contained in Major Cardew's report of the inquiry that followed the Bournemouth accident? There is one feature of the occurrence of Saturday which seems more or less new. It appears that after the explosion (the result of electrical sparking in an explosive mixture of coal gas and air) dense smoke was seen issuing from the junction boxes. This was due probably to the firing of the bitumen by the explosion. Here the further question arises, Were these high tension cables laid in bitumen and not "earthed"? The Board of Trade inquiry will doubtless throw light on all these interesting points, but the point of greatest interest to the public is the question whether the forthcoming investigation will result in efficient preventive measures, rigorously enforced.

"DEATH IN THE POT."

DISASTERS from the consumption of food so unsound as to be poisonous are of frequent occurrence, but seldom so appalling as that which recently befell a notable Florentine family. Signor Chiostri, professor of music, and, indeed, the "first violin," in every sense, of Tuscany, sat down to dinner with his mother, his wife, and his son, and a fish called indifferently "muggine" or "cefalo" was a prominent feature of the *menu*. They partook heartily of it, Signor Chiostri particularly, as he had been working hard all day, and what remained of it was eaten by the domestic who cooked it, who is described as a country girl comparatively new to service. This was on a Friday, and next day the whole family felt poorly. Nevertheless, Signor Chiostri dined with a friend that evening, though manifestly ill at ease. On the following Sunday they were all in bed, and the domestic was removed to hospital. The symptoms commenced with rigors, passing into high fever and soon into delirium. The physicians in attendance called Professor Grocco of the Florentine School of Medicine in consultation, who, having heard all the antecedent circumstances, pronounced each case to be one of poisoning from the same cause—viz., the fish that had been consumed. It seems that the "muggine" or "cefalo" in question had been procured, not from the ordinary fishmongers, but from one of those minor retail dealers who buy up the residual fish from the market and vend it next day to the public so manipulated as to have a show at least of freshness. The domestic (the country girl mentioned above) who cooked it admitted that when cleaning it she found in its interior a number of "pesciolini" (small fishes) in a putrid state, but as all unpleasantness disappeared under the culinary process she made no further remark. Meanwhile, the Chiostri family grew hourly worse, till the first to die was the mother, the Signora Cremona Chiostri, who, recovering consciousness just before death, made over her jewels and valuables to a business friend, saying, "Se dobbiamo tutti morire, lei penserà a tutto" (if we are all to die, you will attend to everything). A post-mortem examination was performed by the Florentine professor of medical jurisprudence, Dr. Filippi, and Dr. Boncinelli, head of the municipal sanitary bureau, assisted by other physicians of the local school; and, while the whole alimentary tract and spleen were found to be in a normal state, the lungs presented lesions of an undoubtedly pyæmic character. Every effort was meanwhile being put forth to save the other members of the family; but next Signor Chiostri died, and then his wife, under symptoms identical with those of the elderly Signora. The event has thrown, not Tuscany only, but all Italy into consternation, for the fish to which the cause of death is ascribed is a very popular one, and the small dealers ("friggitori"), from one of whom it was bought, are a numerous body in every town. The "muggine," or rather "cefalo," frequents the mouths of large rivers where they join the sea, and is noted as an "unclean feeder," even among its not very fastidious kind. What was the history of that one consumed by the Chiostri family will never be known, beyond this—that its interior contained putrid "pesciolini," and that its offensive state was such as to strike the inexperienced country girl who dressed it. Of course, the medical investigations into the case have not stopped at the three post-mortem examinations already performed. That some ptomaine, or cadaveric alkaloid of a variety not yet ascertained, induced the pulmonary pyæmic symptoms and caused the deaths under identical conditions is provisionally believed by the physicians in attendance, and meanwhile the bacteriological examinations set on foot and approaching completion are anxiously awaited by the profession and the public. The immediately salutary results of the tragedy have been the enhanced vigilance practised by the health officers under Bertani's sanitary code and the consequent seizure and impounding of unsound or even suspected foods, particularly fish, crustacea, pork, and mushrooms. This is a reassuring fact in a country like Italy, whose "poverty, but not her will, consents" to the consumption of viands which more favoured nationalities reject, and the managers of whose inns, and even grand hotels, along the line of travel are not always as vigilant as they might be in purging their *menus* of articles which, as in the Chiostri case, may mean "death in the pot."

THE LATE CZAR.

THE sympathetic attention of all nations is at present directed to Russia, mourning the loss of its great peace-making monarch, and to the impressive religious and national ceremonials attending the late Czar's funeral obsequies. The universality of death, which, mounting the marble steps of the palace or crossing the threshold of a workhouse, comes to mighty potentates and paupers alike, perforce awakens a universal feeling of pitifulness and sympathy. It is but a poor consolation, still it is some consolation, to know at such times that no misgivings can arise in the minds of the survivors as to the exact nature of the fatal illness having been understood and appreciated, and that human aid and knowledge were powerless to avert the issue. The published accounts of the results of the necropsy are entirely in accord with the diagnosis which the physicians in attendance had formed of the nature and causes of the late Emperor's illness; and we may add that they are also quite

corroborative of the substantial accuracy of the earliest views expressed in this journal on the subject. From the published official statements of the Czar's illness, which had been evidently framed out of regard to the natural and legitimate desire for information on the part of His Majesty's subjects, as contra-distinguished from the mere cravings of curiosity, it seemed clear that the symptoms and course of the Emperor's ailment were attributable to a form of Bright's disease — chronic interstitial nephritis or granular atrophy of the kidney—with which, unhappily, the medical profession is only too well acquainted, attended with a progressive cardiac affection and a liability to be complicated at any moment with hæmorrhagic infarction and inflammation of the lung or the manifestation of mischief of a similar kind elsewhere. The perverted condition of the blood induced by chronic or established renal disease and the train of troubles that are liable to follow it are, of course, recognised by the profession everywhere. The protocol which has been signed by the Russian medical authorities concludes by declaring that the post-mortem examination has shown that the immediate cause of death was heart failure consequent upon a degeneration of the muscles and hypertrophy of that organ, in connexion with granular atrophy of the kidneys.

TYPHOID FEVER FOLLOWING PARTURITION.

THE October number of the *International Medical Magazine* contains an interesting clinical lecture by Dr. E. E. Montgomery on typhoid fever following parturition, as contrasted with sepsis. He relates the case of a patient who suffered from fever for some time after her confinement, and yet in whom no physical signs of local mischief were discoverable. The possibility that the temperature might have been due to malaria, tuberculosis, or typhoid fever is carefully discussed, and Dr. Montgomery concludes, rather, as it seems to us, on account of the absence of some positive signs of sepsis than from the presence of any positive indications of typhoid fever, that the patient was really suffering from typhoid fever occurring during the puerperium. It is of course quite true that the occurrence of parturition does not necessarily prevent the individual from suffering from other conditions; at the same time it must be remembered that the circumstances of parturition afford very extensive opportunities for the entry of septic matter, and that both the symptoms and physical signs may present very great differences according to the intensity of the poison and the channel through which it is absorbed, or rather, perhaps, according to the tissues in which more particularly its activity is manifested. Of course in the majority of cases there are well-marked local signs, as, for example, in typical cases of pelvic cellulitis or peritonitis following labour. But there is another class of cases where, although undoubtedly the illness is due to a septic process in connexion with parturition, there are no obvious evidences of it to be discovered in the pelvis by physical examination, and no abnormality is noticeable in the discharge from the uterus. In such cases the mischief is due to a localised phlebitis, with the formation of a clot in one of the uterine veins. This condition is attended by a continued fever, the temperature at times running very high; but there may be a complete absence of any pain or any other symptoms, except those necessarily associated with fever. Should the phlebitis extend to one of the trunk veins the nature of the case becomes evident from the occurrence of œdema in the corresponding limb; but, should it not be so, this pathognomonic indication of the morbid condition in progress may be wanting. The œdema may be very late in occurring; it may be delayed till three or four weeks after the delivery, and during the whole of this time there may have been a more or less continuous high temperature; and, again, the œdema may be very slight, and therefore easily escape notice unless the two limbs are carefully compared. Every gynæcologist meets with patients who have been supposed to have had typhoid fever after confinement, and where the physical evidence that the mischief has been due to localised inflammation definitely connected with the process of parturition is quite clear. We may add that the same is true of small collections of pus in the pelvis, as, for instance, in the case of small suppurating ovarian cysts, or in the case of small ovarian cysts that have not suppurated, round which an acute peritonitis has occurred. Many such patients come with a history of having had typhoid fever, when there can be no reasonable doubt that the fever from which they suffered arose in connexion with the local disease.

THE USE AND ABUSE OF TOOTHPICKS.

THE exciting causes of caries of the teeth are invariably external, and among these decomposition of food or of mucus between the teeth holds a prominent place. It follows that removal of such matter must be beneficial. One of the means of accomplishing this is the toothpick, which, judiciously used, is of undoubted value. Food lodges between the teeth from a variety of causes: the extraction of a tooth may lead to those contiguous falling apart and so leaving spaces; improperly filled teeth, such as those left with rough edges or not sufficiently "contoured"—that is, built up to the original configuration of the lost part—will form food traps; irregular position of the teeth or recession of the gums—all these will act in the same way. Attention to the dental toilet before company is certainly inelegant, but it is not necessary here to approach the subject except from a medical point of view. Of the materials used as toothpicks the best is the quill with the sharp point removed, but with this, as with all other forms, care must be observed. By indiscriminate application the gums may be so irritated and injured as to cause recession and thus increase the existing trouble, or inflammation of the tooth membrane may be caused, a most annoying condition, and one in which the still more vigorous use of the toothpick gives temporary relief, only in reality to add fuel to the fire. Metal toothpicks are good because blunt-pointed, but are too thick to pass between teeth at all close together. Wood need only be mentioned to be condemned, for it is a by no means uncommon occurrence for small fibres to become detached and jammed between the socket and tooth, leading to chronic periostitis and even loss of the tooth if the condition is not recognised. An excellent substitute for the toothpick—one having few objections, and one which will save many a visit to the dental surgeon—is antiseptic, waxed, dental floss silk, which, passed between the teeth night and morning, will invariably reveal accumulations which have escaped the tooth brush, however carefully employed.

THE MASTER BAKERS AND THE INSANITARY BAKEHOUSES.

IT seems as if even the master bakers themselves have at last realised that the condition of their trade is not as it should be. The twenty-sixth annual meeting of the London Master Bakers' Protection Society was held last week, and Mr. F. C. Finch, the secretary, reported on behalf of the committee. He complained of the publication of sensational articles upon the unwholesomeness of bakehouses, and of the tendency to over-legislation, of which the bakers' trade would endure more than its share. At the same time he added that "it would be idle to deny that there were some bakehouses badly kept, and that some were badly situated and structurally defective." Mr. Finch's main contention, however, was that the law as it stands is sufficiently strong to deal with these grievances if properly

applied. Some cases in South London which were brought before the metropolitan magistrates revealed circumstances that warranted proceedings. "The committee could not acquit those persons of blame or offer them any sympathy." The secretary also admitted that more than half the bakehouses of London are underground, but said it was impossible to obtain space for constructing bakehouses above ground. Commenting on this meeting, the *St. James's Gazette* of Nov. 9th remarked that the committee of the Master Bakers' Society had "a rather cool suggestion to make. It says: 'The few bakehouses that were so bad as to be impossible to improve should be closed *and their owners compensated.*' This is pretty good. If the bakehouses are so bad as to be incapable of improvement this must be because their owners have been habitually disregarding the law. It is difficult to see why they should be compensated for their own illegality and the laches of the inspecting officials." We are glad to find that the *St. James's Gazette* endorses the principle we have always advocated. It will be impossible to obtain good sanitation if bad sanitation, when disturbed, is to be amply compensated. This is a point we argued out at length, notably when reporting on the Rehousing of the Poor at Manchester.[1] We then urged that "where the owner so far fails in his duty to maintain the property in a sanitary condition that it becomes unfit for human habitation, and the sanitary authority have to go to the trouble of taking this property over so as to pull the bad houses down and build good houses in their stead, the claim to full compensation does not hold good." This argument applies to-day with equal force to the extremely unwholesome, and in some instances absolutely loathsome, underground bakeries, where some of the bread Londoners eat is manufactured.

THE SPREAD OF DISEASE AND THE PLEA OF IGNORANCE.

WE are pleased to see that in some parts of the country local sanitary authorities are proceeding with vigour against such persons as wilfully expose the public to unnecessary and unjustifiable risk of infection, and we trust that the magistrates before whom offenders of this description are brought will not temper their justice with too much mercy. It is, of course, easy in some cases for the offenders to plead ignorance, but it is in many instances impossible to regard their plea as in any sense a justification for the glaring offence committed. For example, we note that in a case recently brought before the Barnsley bench by the Ardsley local board, in which a miner was charged with having neglected to report a case of scarlet fever, the defendant pleaded ignorance. It was shown, however, by Mr. Townley, the Ardsley medical officer of health, that the mother of the infected child had informed him, when presenting another child for vaccination, that one of her children was suffering from scarlet fever. Mr. Townley explained to the mother that the case should have been reported to him, but two days later he found the child in question playing with other children in the street. It was further proved that the local board had issued handbills to every house in the district. In another case brought up by the same local board Mr. Townley reported that the case was notified to him on Oct. 20th, but that on Nov. 1st he found the parent and the still infected child in the room of one of his patients. In the first of these cases ignorance was pleaded, but it appears to us that in both instances something approaching criminal negligence was demonstrated, and we are surprised to see that no punishment beyond costs was inflicted in either case. The magisterial decisions in regard to these questions seem, however, to vary, and we see that in a recent case which occurred at Rowley Regis the bench took a more serious view of the situation and inflicted a fine in addition to the costs. Possibly, in this instance, the fact of the chairman of the local board being upon the bench may have had something to do with the proper appreciation of the offence. The defendant pleaded ignorance, but it was pointed out to him from the bench that the plea was unavailing, insomuch as the local board had posted bills about the district setting forth the necessary precautions. These cases should not only prove a warning to the public in the districts immediately concerned, but should also impress upon sanitary authorities generally the necessity for fully advertising the provisions of the Public Health Act, 1875, and the Infectious Disease (Notification) Act, 1889, in their districts, so that the plea of ignorance may be as effectively met as it was in the cases above related.

[1] THE LANCET, July 18th, 1891.

THE LONDON COUNTY COUNCIL AND THEIR CORONERS.

WITH regard to the scheme of reform which has been drafted by the London County Council with respect to the duties and salaries of their coroners, we have received from Dr. George Danford Thomas, the coroner for Central London, president of the Coroners' Society, and chairman of the London Coroners' Association, the following letter, which has been addressed by him to the chairman and members of the Public Control Committee of the London County Council:—

[COPY.]

Coroner's Office, 21A, Euston-road, N.W., 12th November, 1894.

Coroners' Inquests.

GENTLEMEN,—At a meeting of the coroners for the county of London, held Nov. 7th, 1894 (all of whom were present with one exception), convened to consider the report of the chief officer of the Public Control Department made to your committee, and revised in accordance with the suggestions of your subcommittee, the observations made therein, and the "summary of conclusions and suggestions" were carefully considered, and the following resolution was unanimously adopted: "The coroners of the county of London in committee assembled, having carefully considered the report of the Public Control Committee of the London County Council respecting coroners' inquests, and finding that the said report contains so much controversial matter and involves such important changes in the law, many of them, in the opinion of this meeting, detrimental to the public interests, have decided that at the present stage it is not advisable for the coroners to make any further observations or to offer suggestions thereon."

It may further interest your committee to know that at a meeting of the Council of the Coroners' Society of England and Wales, held in London on Oct. 31st last, the Bill introduced last session into Parliament with the object of dispensing with the view of the body on the holding of an inquest was carefully considered, and the following resolution was unanimously adopted: "That this Council is decidedly of opinion that no alteration in the existing law on this subject is required or is desirable, and that any attempt to do away by law of the view of the body by the coroner and jury would be prejudicial to public interest and policy, and detrimental to public confidence in the court."

I am, Gentlemen, your obedient servant,

GEO. DANFORD THOMAS, M.D.

We defer comment upon the scheme of the London County Council, which obviously offers many interesting points for discussion.

DIPHTHERIA IN LONDON.

THE death-roll from diphtheria in London showed last week a smaller record than in previous weeks for some little time back, the number of registered deaths being 42, which were, as has now long been the case, widely distributed over the metropolis. Of the deaths, 5 belonged to Hackney and 3 each to Paddington, Lambeth, Wandsworth, Camberwell, Woolwich, and Plumstead sanitary areas. The mortality was some 18 per cent. of fresh cases arising in the week. On Saturday last the number of diphtheria patients under treatment in the Metropolitan Asylums Board hospitals was 548. There were, however, in Greater London 19 additional deaths from the disease last week, including 2 in Bromley district and 10 in West Ham. There has been some difference of opinion expressed by the West Ham School Board and the health officer of the borough as to the cause of the diphtheria arising there among school children, the School Board alleging that it is to the state of the foul ditches near the

Hermit-road school that the disease attacking scholars of that branch is due; whilst Dr. Sanders has attributed the disease rather to association of the children in the class-rooms. It appears that of 58 children attacked 45 lived near the ditches, and since the Board are dissatisfied with the health officer's report they have asked him to meet their expert. Whatever the outcome may be, no one can deny the vast influence exercised on the spread of diphtheria by the aggregation of numbers of children in school.

INJURY TO THE CAUDA EQUINA AND LUMBAR ENLARGEMENT.

PROFESSOR SCHULTZE of Bonn relates an interesting case of which a short abstract appears in a recent number of the *Neurologisches Centralblatt*. A young man aged twenty-one years fell a distance of eight metres on his hips, and suffered afterwards from pains in his legs and sacrum and numbness as low as the knees, with incontinence of urine and fæces. After nine months he could walk with crutches, his gait, however, being feeble and his knees and feet rotated outwards. There was some prominence of the second lumbar vertebra, and there was a great amount of atrophy below the knees, the left gastrocnemius, soleus, and tibialis anticus and posticus muscles being almost completely paralysed. On the right side also below the knees the muscles were almost completely disabled. The gluteal regions also on each side were much affected, and so was the region of the sciatic and of the superior and inferior gluteal nerves, while the muscles supplied by the cruralis and obturator nerves remained free. There were also fibrillary twitchings in both glutei. In both peroneal regions, except in the peroneus longus and extensor communis digitorum, there was complete reaction of degeneration, and in the calf muscles partial; while in the glutei there was loss of the direct electrical excitability. The knee-jerk on each side was abolished, and the cremaster reflex was weak. There was weakness of the sphincter ani and of the detrusor vesicæ, but no priapism. Sensibility was much impaired on both sides below the knee and on the back of the thigh, and there was anæsthesia of the scrotum and perineum; while there was a hyperæsthetic zone on both sides in the region of Poupart's ligament. It is not easy, Professor Schultze says, in this case to decide whether the cord itself, or only the cauda equina, or both, were affected.

FAITH HEALING IN RELATION TO CRUELTY.

WHATEVER may be the motives which inspire the religious practices of the Peculiar People, the result of their views with regard to the treatment of illness is undeniably cruel. They are cruel to themselves, to those whom they influence by their teaching and example, but most unjustly cruel to those, whether the aged or infants, who are helplessly dependent upon them. Medical skill in our time can do very much for man's physical advantage. It is not too much to say that the subjection of disease to it has become, to a very great extent, an accomplished fact, and that the word "cure," as commonly understood, expresses with accuracy the direct and usual effect of this healing force. In the face of a proof in its favour so certain and so conclusive it is idle to claim for the neglect of medical measures and remedies by so-called faith healers even a permissive justification when the health of another is at stake. This, happily for our national welfare, is the view maintained by law and the bench in this country. As it was expressed a few days ago by Mr. Lewis, coroner, at Chelmsford to the father of a child who had died from bronchitis, unattended save by an "elder," who anointed it and prayed for it: "When you are ill yourself you can do as you like; but when you have children you are responsible for medical attendance upon them." We have not the slightest desire to interfere with private opinion in religion so long as this does not, in the words of Bacon, "dissolve and deface the laws of human society." To endanger life by neglecting means of cure in blind obedience to a text or a creed is to disregard those primeval laws. As truly might we excuse ourselves in reviving the religious burning of Hindoo widows or the orgies of human sacrifice. If it be contended that these practices had not the sanction of Holy Scripture, we reply that no more has the tenet of the Peculiar People any such authority. The apostolic injunction to employ what was in its day one of the few reputable means of medical treatment is rather to be regarded as a direct command to employ one and all remedies of proved value. It must be admitted by every rational person that whatever is essentially cruel can be justified by no belief or motive, and that in repressing as such the misguided neglect of known remedies by faith healers and other peculiar people the law of this land is just while they are merciless in their infatuation.

INJECTION OF SALT SOLUTION IN THE INSANE.

UNDER the classical title of "Mens Sana in Corpore Sano" a paper appears in the *Boston Medical and Surgical Journal* of Oct. 4th of this year by Dr. George F. Keene, who makes a critical review of the theories propounded at different periods by various observers of the causes of insanity, and who finally leads up to a proposed new treatment which, if the results prove as successful as Dr. Keene hopes, will certainly revolutionise our therapeutics of mental diseases belonging to the class which he has investigated. He refers to a report read by Drs. E. Regis and A. Chevalier-Lavaure at the congress of French alienists held at La Rochelle last August. They investigated "auto-intoxication" in mental diseases and distinguish three orders of clinical facts, considering separately the mental disorders that develop as a result—(1) of acute infectious diseases, (2) of those due to visceral disturbances, and (3) of diathetic maladies. They point out how typhoid and eruptive fevers are sometimes followed by insanity, and ask, Where comes this if not from toxines peculiar to the disease? The delirium of fever is surely the result of deficient excretion. Once make this free, and delirium ceases and the temperature falls. Dr. Keene then refers to the experiments of Dr. Carlo Sanquirico of Sienna. Two sets of animals were poisoned with the same doses of strychnine, chloral, alcohol, aconitine, paraldehyde, caffeine, and urethane. Into one set was injected a saline solution amounting in quantity to 8 per cent. of each animal's weight. The other set were untreated. The results were remarkable. The animals into which the saline solution had been injected all survived, but the others all died, thus showing that vegetable alkaloids can be diluted and washed out of the system before their toxic effect is complete. Ilberg and Lehmann in Germany within the last year report several cases in which good results followed the hypodermic injection of 600 c.c. of saline solution in the fasting insane. This procedure was adopted for the sole purpose of nutrition, and was recommended instead of forced feeding. Dr. Keene, however, adopts quite a new departure, and is probably perfectly correct in believing himself to be the first in the field. He uses the salt solution subcutaneously in large quantities (not less than two quarts daily) for the systematic treatment of those forms of insanity believed to be of somatic origin, or, in other words, due to auto-infection or intoxication. So far he has only treated one case, but he states that the improvement has been so marked that there is great ground for encouragement. The solution used was a sterilised, blood-warm, physiological saline solution (NaCl, 0·73 per cent.). The patient was a single woman aged thirty-three years, with religious melancholia. She refused food and had lately entertained ideas of suicide. One quart of the solution was introduced subcutaneously night and morning, until fifteen quarts had

been used. The improvement was marked and immediate. Dr. Keene observes that one case or part of a case is of no significance in proving the efficacy of any form of treatment, but he merely offers this particular case as a suggestion of what seems to be a promising treatment of mental disease.

THE MENTAL CONDITION IN CHOREA.

DR. A. BRETON, after an investigation of a large number of cases of chorea, has arrived at the following conclusions in reference to the condition of the mental powers in patients suffering from this complaint.[1] He has found that the majority of cases of chorea are complicated by perversion of mental processes more or less marked. The psychical symptoms may be divided into two groups: in the first he places those which include alterations of moral sensibility, of character, of intelligence, want of attention, and loss of memory and of affection for those nearly related to the patient; and in the second those which occur more rarely, such as "night terrors," hallucinations, and what Dr. Breton terms "folie choréique." The first class of phenomena are so common as almost to form one of the ordinary symptoms of chorea. Fright, terrors, and hallucinations are rare, whilst "folie choréique" is very exceptional. Hallucinations are generally observed only at night, just when the patient is falling asleep, but they may continue for some time, interrupting or preventing sleep; those of sight generally predominate, but more rarely there may be observed those of hearing, taste, smell, or even touch. Affections of speech may also be mentioned, affecting the muscles of the tongue and lips, not caused by chorea, but due to mental causes. "Folie choréique" may take the form of simple mania, of delirium, of mania with hallucinations, or revert to a melancholic form, with profound depression and suicidal tendencies. Recovery from the mental symptoms in acute cases of chorea usually follows the cessation of the motor symptoms caused by the chorea; they cease when convalescence from the primary disease is established. But the neurosis may pave the way for permanent psychical trouble, such as moral degradation, mental alienation, and dementia. Dr. Breton, however, believes that the more pronounced psychical phenomena met with in the course of chorea are not directly due to the disease, but only receive from it special characters. They are complications rather than symptoms proper, and hereditary taint can always be traced; and he would look upon them as mental phenomena occurring in patients who have a hereditary tendency to such attacks, which have been precipitated by the chorea.

A SPECIAL MEETING of governors of the Chelsea Hospital for Women will be held at the hospital on Wednesday, Nov. 28th, at 3.30 P.M. The agenda comprise: (1) to receive the resignations of the members of the Board of Management; (2) to elect a new Board of Management; and (3) to receive suggestions from the medical staff. Sir Algernon Borthwick, Bart., M.P., is announced to open the proceedings.

LORD RUSSELL of Killowen (Lord Chief Justice of England) has consented to preside at the festival dinner in aid of the funds of the City of London Hospital for Diseases of the Chest, which will take place at the Hôtel Métropole on April 30th, 1895.

THE Home Secretary and Sir Walter Foster received on Wednesday last a delegation from the British Medical Association, who urged the necessity for improvements in the present system of granting certificates of death.

[1] L'Union Médicale, Oct. 27th, 1894.

THE annual dinner of the staff and past and present students of the Dental Hospital of London will be held on Saturday, Dec. 1st, at the Whitehall Rooms, Hôtel Métropole, under the presidency of Mr. S. J. Hutchinson. Gentlemen either now or formerly connected with the hospital or medical school who may through inadvertence not have received special notice, and who desire to be present, are requested to communicate with the Dean at the Dental Hospital, 40, Leicester-square, W.C.

THE annual general meeting of the Anatomical Society of Great Britain and Ireland will be held on Monday next, Nov. 19th, at 4.30 P.M., at the London Hospital Medical College. Professor Cunningham and Dr. Telford Smith will make a communication, among others, upon the Brains of two Microcephalic Idiots, illustrated by a lantern demonstration; and Sir George Humphry will read some Notes on the Idiot Skull.

PROFESSOR ALEXANDER OGSTON will take the chair at the November dinner of the Aberdeen University Club, London, which will take place on the 21st inst., at 7 P.M., in the Holborn Restaurant.

MR. J. LORRAIN SMITH, M.D. Edin., has been elected Demonstrator in Pathology at the University of Cambridge.

A VISIT TO PARIS TO INQUIRE INTO THE PRACTICAL TREATMENT OF DIPHTHERIA WITH ANTI-TOXIN SERUM.

BY JOHN A. TURNER, M.B., D.P.H. EDIN.,
MEDICAL OFFICER OF HEALTH TO THE COMBINED DISTRICTS OF LEICESTER AND RUTLAND.

A VERY serious epidemic of diphtheria existing in parts of the districts of which I am medical officer of health caused me to be deputed by some of the authorities of these districts to investigate the value of the antitoxin-serum treatment as carried on in Paris, with special reference to the advantages which would result if it were possible to obtain a supply of the serum. With this view I went to the Pasteur Institute and requested permission to make inquiries, to attend the lectures and demonstrations of Drs. Roux and Martin, and also to be present at the cliniques at the Hôpitaux Trousseau et des Enfants Malades.

I propose to show generally the following seven points: (1) how the antitoxin serum is prepared; (2) how it is applied; (3) the result of such application; (4) the diagnostic and prognostic value of the treatment in these hospitals; (5) how far the treatment could be utilised in general practice amongst us in England; (6) how a supply of antitoxin serum can be obtained; and (7) the precautions to be taken in its use in general practice, especially with regard to the serum itself.

Preparation of the Antitoxin Serum at the Pasteur Institute.

I do not propose to go into minute details of the processes or into any discussion of the principles of immunity upon which the treatment is based, as they have been fully explained in the columns of THE LANCET and elsewhere. I propose briefly to state exactly what I saw.

Toxin is prepared in flat-bottom glass vessels with lateral tubes containing a sterilised, peptonised broth; into this broth are introduced recent and active diphtheria bacilli. The contents of the vessels are then heated up to 37° C., a current of air being passed through water into the vessel. This process is continued for about a month. The toxin is then filtered off through a Pasteur-Chamberland filter into sterilised air-tight bottles corked with sterilised cotton-wool. Toxin thus prepared is injected under the skin of the neck of the horse, just in front of the shoulder, in quantities varying from 1 to 30 c.c., two or three times a week for three months, at the end of which time the animal is

regarded as immune. I saw several horses in various stages of immunity, seemingly none the worse for the injection of the toxin. There are at present eighty horses at the disposal of the institute.

From the jugular vein of a horse thus immunised is drawn off a variable quantity of blood, which is passed directly into sterilised glass jars by means of indiarubber tubes. These jars are air-tight and protected from the light. From them the antitoxin serum is decanted into small bottles containing 20 c.c., or enough for a first injection. It is these small bottles that are supplied to the general practitioner. The antitoxin serum at the hospitals is kept in bottles with two glass tubes passing through an air-tight stopper. On one of these tubes is fixed a piece of indiarubber tubing, which is secured by a clamp; the other glass tube is stopped with sterilised cotton-wool. This indiarubber tubing is for connecting the mouth of the syringe—later to be used in injecting—when filling it with serum from the bottle. This syringe, known as "Collins's," is made of glass and metal, and is capable of containing 20 c.c. The indiarubber tubing is attached to the mouth of the syringe and the needle fixed to the end of the tubing, thus serving to prevent the needle being broken if the child is restive.

Injection of Antitoxin Serum at the Hospitals.

Before using the syringe it is sterilised inside and outside by boiling in water, and is tested to see that it acts and that the needle is clear. It is then filled with antitoxin serum and is ready for use. The lower part of the surface of the abdomen and flank is sponged with a solution of perchloride of mercury (1 in 1000), a piece of skin is pinched up with the finger and thumb of the left hand (duly aspecticised), and the needle, held with the right hand at the base where it joins the tubing, is then gently but firmly passed into the skin. The injection is then made, care having been taken only to fill the syringe with the amount of antitoxin serum required, and the needle having been withdrawn the part is covered with properly prepared cotton-wool. The slight œdema resulting disappears in from fifteen to thirty minutes. No reaction follows, and up to the present no injurious effects whatever have been produced, and the point of puncture is hardly perceptible the next day. After using the apparatus it is taken to pieces, again placed in boiling water, and well cleaned.

Results from the Injection.

Antitoxin serum is held to be both preventive and curative. For example, if in a family of children where there is a case of diphtheria all the other children were to be injected (those under ten years of age with 5 c.c. and those over ten with 10 c.c.), it is stated that the spread of the disease among the children would be checked; and that should a child have already contracted the disease its course would be modified. But at present, with regard to the preventive properties of antitoxin serum, sufficiently numerous observations have not been made. They should soon become more general, as the injection of this small dose is harmless and no risk is run, while the inconvenience caused is transitory.

When a case of diphtheria is suspected the treatment begins as follows: 20 c.c. of antitoxin serum are injected at once, or if the patient is over fifteen years of age 30 or 40 c.c., two injections in the latter case being made, one on each side.

The Treatment of Diphtheria with Antitoxin Serum in the Hospitals.

I here quote from cases which I was allowed to keep under my own observation at the Hôpital des Enfants Malades.

At this hospital there are two pavilions for diphtheria, each pavilion containing one ward. These pavilions are separated from the rest of the hospital, but are connected with each other by a covered passage, in which is situated the administration department. In this part of the building are two or three rooms, in one of which long white linen coats are provided for the use of those attending the clinique in the diphtheria wards. A child, being admitted, is submitted to the following routine. It is injected at once with 20 c.c of antitoxin serum and put to bed, the temperature, pulse, and respiration first being taken. The mouth is then opened and the throat examined, and a thin spatula with a broad, flat point passed across the back of the throat. This spatula is then introduced into sterilised serum in a test-tube, which is then plugged with sterilised cotton-wool and sent away, so that the fluid after cultivation may be examined for bacteria. In twenty-four hours, by examining this cultivation, the medical officer in charge of the case learns whether the child is suffering from pure diphtheria or whether the cultivation has shown other bacteria, associated or not with those of diphtheria. In the meantime the case is treated as diphtheria. No caustics or any solutions which interfere with the attachments of the membranes are used, the theory of the treatment being, of course, to arrest the further development of the bacilli, with the result that the false membrane will be thrown off; but washes of boracic acid and salicylic acid are used. As a matter of fact, in ordinary cases, after injection of antitoxin serum, the false membrane is got rid of so easily that the local applications are dispensed with. The treatment does not alter the usual dieting of diphtheritic patients at all, much importance being paid to keeping up the strength with nourishing food, except in cases of albuminuria, where at this hospital it is usual to give milk diet.

On admission into the hospital the history is inquired into in the following manner: Has the child been ill before? Is he subject to sore-throat? Does he catch cold easily? Does he complain of his throat? Since when? Does it hurt him to breathe? Does he cough? Is it harsh? Is his voice strong, harsh, or thin? Is he feverish or sleepless? Has any treatment been applied? What? Has he brothers or sisters? Are they or have they been ill? Is there any diphtheria in the neighbourhood?

CASE 9.[1]—A child four years of age. The first day, according to custom, 20 c.c. of antitoxin serum were injected; the pulse was then 146. The evening temperature was 38° C.—i.e., 100·5° F.—and the respiration normal. Twenty-four hours afterwards the pulse had fallen to 108, and the temperature to 37·8° C. The Löffler bacillus was discovered in the cultivation. This fall in temperature occurring coincidentally with the slowing of the pulse, no more serum was injected, and the child was well in five days. There was in this case no albuminuria.

CASE 10.—This case—a child nine years of age—was a pure "angine diphtheria," but of a more severe type than the previous one. Twenty c.c. of antitoxin serum were injected on admission. The pulse was then 140. The evening temperature was 39° C. and the respiration 33. Twenty-four hours afterwards the temperature was found to have risen to 39·2° and the pulse to 164. Twenty c.c. more of antitoxin serum were then injected. The Löffler bacillus was discovered in the cultivation from the throat. The third day the temperature fell 1°, while the pulse remained 160; the respiration was 29; and on examining the urine albumen was found in considerable quantity. Thus the prognosis was guarded, for although the temperature had fallen the pulse was still rapid; 10 c.c. more of antitoxin serum were then injected. The next day, or fourth day of treatment, the temperature fell yet another degree, and the pulse-rate diminished to 119 and the respiration to 26. The albumen in the urine was slightly diminished in quantity and the serum was then discontinued. The child recovered.

Thus in two cases from 20 c.c. to 50 c.c. of antitoxin serum were injected, which was sufficient to cure the disease.

CASE 11.—This case, a child aged three years and a half, was one in which the pure "angine diphtheria" bacillus, or Löffler's bacillus, was associated with a streptococcus. The temperature on admission was nearly 39° C., and the respiration 150. The first day 20 c.c. of antitoxin serum were injected. The next day the temperature fell a degree, and the pulse and respiration were slowed to 140 and 30 respectively, the evening temperature, it should be noted, being lower than the morning. Ten c.c. of antitoxin serum only were injected the next day in view of the fall in temperature and abatement of symptoms. The usual bacteriological examination revealed the streptococcus, and as it was known to be present it might have been wiser to have injected 20 c.c, as was actually done the next day. The third day the temperature rose to 39°, the pulse-rate increased to 170, and the respiration was so accelerated, 40 to the minute, that it was feared broncho-pneumonia had supervened. The dose of injection was increased, and 20 c.c. were injected. The next or fourth day of treatment the temperature fell more than a degree, the pulse-rate was reduced to 135, and the breathing became less hurried. Had it not been known that the streptococcus was present it would have been thought the disease was cured and treatment would have ceased, but under the circumstances, according to routine, another

[1] This and the other numbers are the numbers of the cases in the books of the hospital at the time of my observations; and I give the temperatures also in Centigrade figures as there given.

10 c.c. were injected. The presence of albumen in the urine was observed on the fourth day, increasing in amount up to the sixth, but not in great quantities. This was presumed to indicate that the toxin of diphtheria was acting on the kidneys, and if the amount of albumen had not decreased a further small dose of antitoxin serum would have been injected. From the last injection the temperature, pulse-rate, and respiration-rate continued to fall, and the albumen did not increase in quantity after the sixth day, so no more serum was injected. The child recovered.

CASE 12.—This case, a child aged five, was one of "croup" (diphtheria of the larynx), and was operated upon immediately. The cases with laryngeal symptoms which are not operated upon are, it may be well to remark, treated as severe "anginous" cases, more particular attention being paid to the indications given by the respiration. The first day the temperature was 38° C. and the pulse-rate 35. Tracheotomy was performed, and 20 c.c. of antitoxin serum were injected. The second day the same dose was injected, as the temperature, pulse, and respiration continued to ascend. On the third day the temperature fell one degree and the pulse slowed down, but the respiration increased in frequency; 10 c.c. of serum were therefore injected. On the fourth day the cannula was removed and the child breathed well. From this time the symptoms abated and no more serum was injected. Löffler's bacillus was present in this cultivation. The child recovered.

CASE 13.—This case, a child three years and a half of age, was also one in which tracheotomy was performed. The temperature on admission was 38° C., the pulse-rate 159, and the respiration 49 per minute. Tracheotomy was performed on admission, and 20 c.c. of antitoxin serum injected. The bacteriological examination showed a streptococcus and a staphylococcus to be associated with the Löffler bacillus. The prognosis was very grave the day after the operation, for the temperature rose to 40° and the pulse-rate to 170, while the respirations were 40 per minute. Albumen was also seen to be present in the urine; 20 c.c. of antitoxin serum were injected. On the third day all the symptoms abated somewhat, but in consideration of the presence of associated bacteria the situation was held to be serious, and for the next two days 10 c.c. of the serum were injected. On the fifth day the breathing was quicker, having risen to 55, leading to fear of broncho-pneumonia having supervened. The temperature also rose a degree and a half. Another dose of 5 c.c. of antitoxin serum was injected. On the sixth day the cannula was removed and the breathing became easier. The child recovered, but in cases of this description death occurs just as often as recovery, and in the first two days of this case the prognosis was so grave that a fatal termination was expected.

(To be continued.)

THE CZARS AND THEIR PHYSICIANS.

THIS might form the title of an interesting volume, as, indeed, M. Pierling's brilliant sketch, "Un Médecin Diplomate: Laurent Rinhuber" (Paris: Émile Bouillon), opportunely reminds us. Till very recent times Russia was dependent on the schools of Western Europe for her teachers and practitioners of medicine. Many of those rose to high eminence in the official sphere, and after their capacity had been tested at Court were often entrusted with important and delicate missions, in which their trained powers of observation and knowledge of man in all his phases stood them in admirable stead. M. Pierling tells us how the young physician of Leipsic got attached in 1673 to the suite of Paul Menzies, Baron of Pitfoddels, when that able Scottish counsellor of the Czar Alexis was on a mission to the German Courts to gain the alliance of their respective sovereigns in a war against the Turks. This was Dr. Rinhuber's opportunity, and the successive stages by which he rose in the confidence of the Russian Royal Family are as full of dramatic interest as many a play. In the atmosphere of the Kremlin he soon mastered what M. Pierling calls the "trois arcanes sur lesquels repose l'empire Russe—l'ignorance du peuple, l'unité religieuse, la défense de voyage"; and if he used his knowledge somewhat less to the advantage of his Imperial master than to his own he was, in his biographer's estimation, acting up to the not very exalted standard of public morality prevalent in the seventeenth century. Three years after his connexion with Baron Menzies' mission, "le petit étudiant de Leipsic, transformé en docteur du Tsar," was at the height of his ambition with "un traitement annuel de cent soixante-dix roubles et des provisions alimentaires pour la valeur de cinquante roubles par mois." How he forfeited this post; how, after vicissitudes of fortune which carried him to London, Rome, and Paris, and which rival those of Gil Blas in variety and even mirth-provoking quaintness; and how in 1684, through the intervention of Prince Golitsyne, he might have re-entered office as physician at the Russian Court, if he cared—all are set forth in M. Pierling's sparkling pages with a realistic power which only the skilled *archiriste* who is also a gifted man of letters can attain. But a still abler and much more elevated type of character may be adduced from the long roll of foreign "physicians to the Czars" in the person of Sir James W. Wylie, whose high scientific accomplishments, professional skill, and diplomatic experience yet await their biographer. This sagacious Scot—another example of what the late Lord Malmesbury says in his biography when speaking of Dr. Robert Ferguson, that there is no better authority on the current of political feeling than the busy medical consultant—is a prominent figure in the "Diplomatic Reminiscences" of Lord Augustus Loftus, who places his promptitude and sound judgment in the most vivid light, when these qualities were suddenly called upon in difficult circumstances. Sir James Wylie's testimony dissipates for ever the pertinaciously repeated reports that the Emperor Alexander I. was poisoned or otherwise assassinated. It was in the November of 1825 that the Czar, on his return from Moscow to St. Petersburg, had been secretly apprised of a conspiracy against him by which he was to meet the same death that his father the Emperor Paul had encountered. Possessed by this warning, Alexander, instead of reaching St. Petersburg by the route he had been following, turned back towards Taganrog, intending to work his way homeward by that long detour to the south. But at Taganrog he contracted what was then known as "bilious fever," and for this Sir James (then Dr.) Wylie, at the Empress's instance, prescribed. Nothing, however, would induce the Czar to follow the physician's instructions. "It seemed as if he courted death, and would take no means to avert it. He ordered a priest to be sent for"; and this spiritual adviser strongly backed Dr. Wylie and the Empress in urging him to take the prescription, which he finally agreed to do. Congestion of the brain had set in, and leeches were, by Dr. Wylie's directions, applied; after which the Empress visited him and expressed her thanks for his compliance with the medical instructions. He then called for Dr. Wylie and asked him whether he and the Empress were satisfied. On being answered in the affirmative he suddenly tore off the leeches, insisted on the malady running its course, and shortly afterwards expired. The anecdote, as given from Sir James Wylie's lips by Lord Augustus Loftus, is not without its significance at the present time, fraught as it is with the lesson that, amid the sinister rumours that originate (no one knows how) as to the death of a Czar, credence should be withheld till the only authority entitled to speak, a responsible physician in attendance, has issued his official report. The distinguished Professor of Special Pathology and Therapeutics in the University of Berlin, Dr. Ernst Leyden, who took so influential a part in the consultation at the death-bed of Alexander III., has, at the proper time and in the proper way, given the profession and the world the authentic account of the Emperor's illness. Thus, what Sir James Wylie did in 1825 he has done in 1894—rendered to historical truth a service as conclusive as it is opportune, and vindicated before the lay public the honourable relations subsisting for centuries between "the Czars and their Physicians."

MALLEIN AND TUBERCULIN AS DIAGNOSTIC TESTS OF GLANDERS AND BOVINE TUBERCULOSIS.

A VERY extensive and prolonged experience of the use of mallein in Europe and the United States of America, as an aid in the diagnosis of latent or occult glanders, has now placed its value beyond doubt, and has shown that it may be

most usefully employed in getting rid of that disease more rapidly than heretofore. Not that the extinction of the malady was not possible when the proper measures were skilfully applied; for the British army horses at home, constituting an establishment of some fifteen thousand animals, were freed from it before that substance was known, and have been kept free up to the present day, notwithstanding the risks they incur while marching through the country and being billeted in all kinds of stables. But the fact that, from some cause or other, glanders lingers in civilian stables and causes a notable mortality among their inhabitants, with now and again a death in human beings through accidental infection, renders the employment of mallein absolutely necessary in the case of studs of horses in which the loathsome disease has appeared, and particularly when it cannot be quickly eradicated. In these instances the infection is maintained by horses which, though contaminated, do not exhibit any definite symptoms, perhaps no signs whatever, and yet may be capable of involving others. In France the use of mallein has perhaps received the most attention, and the facts accumulated as to its usefulness have been so striking that its employment is now officially recognised, as is also the case in Switzerland and some other countries. At the recent International Congress of Hygienists held at Budapest, M. Nocard, the eminent veterinary professor, read a paper on the subject, and there are very few, if any, better qualified to express an opinion on it than this authority. He gave the following as the results of his long and careful observations: 1. The injection of mallein is the best, most certain, and most rapid means of diagnosing doubtful cases of glanders. 2. In the glandered horse, no matter how recent or limited the lesions may be, it always gives rise to a characteristic reaction. 3. This reaction is only significative when it is complete—that is, when there is a rise in temperature of at least 1·5° C. (thermic reaction), and a voluminous, hot, and painful œdema at the seat of injection, with marked alterations in the general health, such as prostration, loss of appetite, tremblings, &c. (organic reaction). All these phenomena persist for a considerable time, for after twenty-four, thirty-six, and even forty-eight hours the depression still remains, and the temperature is more than a degree above normal. 4. When the mallein produces no reaction, then it may be affirmed that glanders is not present, no matter what the visible suspicious lesions may be. 5. When mallein is had recourse to it is necessary to be careful to avoid all risks of mistake; for instance, if the suspected horse is feverish the injection should be deferred. The animal should be protected from atmospheric variations (such as the sun, fogs, rain, wind, &c.), which are in themselves capable of varying the temperature in the rectum by 1·5°, 2°, or more; and it is also well to know that certain diseases, and especially "strangles," induce great variations in temperature, though in such cases the hyperthermia is not so lasting as that caused by mallein in glandered horses, while the organic reaction is absent. 6. When all the horses in a contaminated stable are submitted to the mallein test many of them which do not show any clinical signs of disease react, and if a portion or all of them are killed there will at the necropsy be found glander lesions in the lungs, which are sometimes numerous and important, but often discrete and only represented by some translucid tubercles. But if these animals are kept isolated and secure against fresh contamination only a small number of them become clinically glandered, the others remaining healthy and not infecting their neighbours when allowed to mix with them. While they are isolated, if they are submitted periodically to the mallein test, the number of those which react diminishes each time, and these may be considered as cured of the glander lesions revealed as existing by the earlier injections. 7. It is possible, and even probable, that some share of this regression and definitive cicatrisation of the glander lesions in the lungs, when these are limited and recent, may be due to the mallein, but of course it is impossible to affirm it. 8. The systematic employment of mallein renders the prophylaxis of equine glanders an easy matter.

It not infrequently happens that cases present themselves in mankind which clinically, and even in their history, give rise to suspicion as to the existence of glanders; but still there are doubts. Might not recourse be had to mallein? In one instance, reported in France, this was done and the presence of glanders demonstrated. With regard to the use of tuberculin as a test for the existence of tuberculosis in the bovine species, this also has become a more reliable, and therefore more valuable, reagent, with the extended experience and closer observation of those who were the first to employ it, and foremost among these was M. Nocard. At the Congress above alluded to several speakers testified to its being indispensable in diagnosing that serious scourge, but one of them, Professor Hess of the Berne Veterinary School, while altogether in its favour, thought that in some instances it acted perniciously in developing the disease in an acute form in animals in which the tuberculous lesions were limited, stationary, or on the way to recovery. In some observations on tuberculin published in THE LANCET a few months ago[1] instances were given in which this result was inferred. It may be mentioned that M. Nocard stated at the Congress that he had been successful in curing nine out of fifteen cases of bovine tuberculosis by injections of creasote in successively increasing doses of ten, fifteen, and twenty grammes of that drug.

SANITATION IN JAPAN.

AT a time when Japan is manifesting to the world the efficiency of her naval and military organisations, and setting an example to Asia by opening her windows to Western civilisation, it is especially interesting to be able to learn from a report that has just reached us something of Japanese sanitary administration—to discuss, in other words, the life-saving rather than the death-dealing machinery of this interesting nation. We are enabled to do this by the report sent in by the Director to the Central Sanitary Bureau attached to the Home Department of the Imperial Japanese Government. The report refers to the year 1890, and is written in English. Commencing in natural sequence with the birth statistics, we find that the birth-rate during 1890 was 28·15 per 1000, the rates of the several prefectures ranging from 35·5 to 20·9 per 1000, and the fluctuation which the birth-rate has undergone within recent years will be apparent from the following table:—

TABLE I.—*Showing the Birth-rate per 1000 of Population from 1881 to 1890.*

Year.	Birth-rate.	Year.	Birth-rate.
1881	25·6 per 1000	1886	27·28 per 1000
1882	24·9 ,,	1887	27·07 ,,
1883	26·4 ,,	1888	29·60 ,,
1884	25·75 ,,	1889	30·17 ,,
1885	26·86 ,,	1890	28·15 ,,

The general death-rate of Japan for 1890 was 20·18 per 1000, a slight decrease upon the rate of the previous year. There was a considerable increase in the mortality from infectious diseases, owing mainly to the prevalence of cholera and dysentery. It will be of interest in connexion with the death-rate of the country if we give here a table showing the manner in which the rate has varied from year to year, and also the natural increase of the population in each of the several years:—

TABLE II.—*Showing the Ratio of Deaths and the Ratio of Excess of Births over Deaths per 1000 from 1881 to 1890.*

Year.	Ratio of deaths per 1000 persons.	Ratio of the excess of births over deaths per 1000 persons.
1881	18·7	7·0
1882	18·1	6·9
1883	17·7	8·8
1884	18·45	0·25
1885	22·67	0·67
1886	24·60	3·80
1887	19·29	7·89
1888	19·14	10·46
1889	20·36	9·81
1890	20·18	7·97

Dealing now in brief with infectious diseases embraced in the report, we find that in June, 1890, cholera of an epidemic and malignant character was introduced into Nagasaki, and that in the autumn months it became prevalent over the whole country, giving rise to 46,019 cases and 35,227 deaths.

[1] THE LANCET, Feb. 3rd, 1894.

It appears that since 1886, when there was a great epidemic of cholera in the country, the disease has been practically absent from Japan, and although a few cases were brought to the country from Hong-Kong and Amoy in 1888 the strict medical inspection of vessels was instrumental in successfully preventing the spread of the disease. Japan, although practising medical inspection by sea as well as by land, does not seem to have entirely given up the practice of quarantine, and we read in the report of an unfortunate Turkish man-of-war infected with cholera having been placed in quarantine for a period of three weeks. There is, however, no doubt that the Japanese fully appreciate the value of improved sanitation as a cholera preventive, and in this connexion the Director of the Sanitary Bureau remarks: "The prevention of the propagation of the epidemic becomes increasingly difficult as the communication between places becomes more frequent; this is particularly the case in places where the waterworks and drainage works are not yet improved; impure water and a filthy state of the earth's surface being favourable conditions for the propagation of the virus." Typhoid fever seems to have been generally prevalent in Japan during 1890, and the fatality rate of those attacked amounted to 24·35 per cent. In the matter of dysentery the report before us contains some interesting information as to the behaviour of the disease. We are told that the limits within which dysentery prevails in Japan are extending year by year, and fears are expressed that the disease is becoming endemic in the country. In the year 1890 there were in the whole of Japan 42,633 cases with 8706 deaths, by far the greatest number of them occurring in Kyūshū and Shikoku. No explanation is offered in the report of the increased prevalence of this disease, but it appears that the water supply in many of the districts is far from satisfactory. The diphtheria which prevailed in Japan during the year under review was of a very malignant character, the fatality rate of 2448 cases being 58·74 per cent. The chief incidence of the disease in point of time was in November, December, and January. There were 251 cases of typhus fever with 67 deaths in the country in 1890, but no details are given as to the relation of the cases to overcrowding &c.; the disease is, it appears, on the decrease. Small-pox has steadily decreased in Japan since 1886 and in 1890 there were but 291 cases with 25 deaths. A very considerable falling off in the number of vaccinations performed has taken place since the epidemic year of 1886, and this fact, together with the enormous number of unsuccessful operations, is well seen from the table below, which is taken from the report.

TABLE III.—*Showing the Number of Vaccinations during the Five Years 1886–1890, with results.*

Year.	First time.			Second time and above.			General total.	Temporarily vaccinated.		
	Successful.	Unsuccessful.	Total.	Successful.	Unsuccessful.	Total.		Successful.	Unsuccessful.	Total.
1886	1,304,380	165,638	1,470,018	1,320,729	1,760,488	3,081,217	4,551,235	629,020	662,192	1,291,212
1887	967,152	126,488	1,093,640	767,941	1,204,845	1,972,786	3,066,426	543,023	825,060	1,368,083
1888	923,358	123,975	1,047,333	419,825	828,830	1,248,655	2,295,988	198,603	435,648	634,251
1889	858,674	121,944	980,618	291,545	571,785	863,330	1,843,948	31,711	94,633	126,344
1890	919,583	139,501	1,059,084	282,395	596,480	878,875	1,937,959	11,620	36,001	47,621

It is to be regretted that more details concerning this interesting table—such, for instance, as the meaning of the terms "unsuccessful" and "temporarily vaccinated"—are not furnished. Perhaps we may venture to hope that further details as to the practice of vaccination in Japan will be given in the report for 1891. The water supply of Tokyo was during 1889 subjected to a weekly bacteriological and chemical examination, with the result that the water was found to become increasingly polluted as it passed through the city, the pollution being due, it appears, to leakage into the water mains. It has now been decided to supply a pure water supply for Tokyo and Osaka, and in both these cases the local authorities are being aided in their expenditure by Government grants, inasmuch as the Japanese Legislature recognises that the supply of pure water has an indirect influence on the health of the whole country. We can cordially recommend the report of the Sanitary Bureau to all those who take an interest in the progress of sanitation in the East.

THE LAUNDRY AND SANITARY EXHIBITION.

THE Laundry and Sanitary Exhibition, held at the Agricultural Hall, Islington, from the 7th to the 17th inst., though a very modest one as compared with the exhibitions to which Londoners are accustomed, will nevertheless render great practical service. It is organised by Messrs. Cordingley and Co., proprietors of the *Laundry News*, and has enabled those who are interested in the subject to study the most recent improvements in what may now be considered as the science and the craft of washing. The old days of the simple wash-tub are rapidly disappearing. Modern industrialism has engrafted itself on this as on most branches of labour. Steam and electric power now replace manual labour in the washhouse, as in so many other occupations, the scrubbing, washing, rinsing, and ironing of the *fin du siècle* are all done by powerful and expensive machinery. The simple line stretched across the open field on which linen was hung to dry is now replaced by the drying-room, where both heat and currents of air are produced by machinery. Formerly a sovereign or two sufficed to purchase the stock-in-trade necessary to establish a small laundry; but then all the work was accomplished by hand and the only force used was that of human labour. But this style of washing is condemned, and, like the hand-loom, will soon disappear. The change is certainly beneficent, so far, at least, as the interests of public health are concerned. Washing must now be done, not in the little cottage, the back kitchen or scullery, but in a large factory elaborately provided with machinery and steam power. In order, however, to make this expensive machinery pay washing must be carried out on a very large scale. So many articles that require washing must be collected to feed these machines that they can no longer be collected by hand. Thus the first thing seen on entering the Laundry Exhibition is a large number of waggons and carts used for conveying linen from houses, hotels, &c. That the revolution in laundry work will extend from the towns to the rural districts is shown by the exhibition of a waggon made by Mr. T. Blanch, coach-builder and wheelwright. It is contrived especially to travel over rough roads, weighing only from five to six hundredweight, though it can carry a ton. It is poised on American wheels and covered with a canvas awning. Effective arrangements are made inside the waggon for placing the cane linen baskets. This firm also makes vans lined throughout with zinc plate to carry infected linen.

The first requisite for washing is soft water. Many, if not most, of the town water-supplies are too hard, and some softening process is necessary. Messrs. John Gibbs and Son, however, exhibit an ingenious method by which the rain water, even of towns, can be utilised. The pipe that receives the water from the roof of the house is placed in connexion with a drum called the "patent automatic water separator." Inside there is a trough so balanced that at first the water it receives overflows to the left side of the drum and then to a pipe to the bottom of the drum described as the foul water outlet pipe. The water is indeed foul, for it is mixed with the dust, the smuts, &c., which have accumulated on the roof of the house. But after awhile these are all washed away and then the water is clean. It is this clean water that could be advantageously used for washing purposes. At the bottom of the trough there is a strainer through which a few drops of water fall into a receptacle which, when full, constitutes a counterweight and tilts the trough up in the opposite direction. The

water then flows out of the trough to the right instead of to the left of the drum, and there it is received by another, the pure water pipe, and conducted to the tub or cistern where it is proposed to collect the clean rain water. The time taken to fill the receptacle—which when full of water is heavy enough to act as a counter-weight—is the time required for the rainfall to wash the roof of the house. There are also exhibited various methods of softening water, notably the Andrew Howatson's patent water softeners (Thwaites Brothers, Limited, Bradford). This system can be applied on a small scale for a single laundry or on a large scale for the whole water-supply of a town. Its advantages consist in the thorough mixing of the water with the softening agent, its automatic action, the powers stopping when water is not drawn off, and the accuracy of the quantity of the softening ingredients. After obtaining by some of these means a supply of suitable—that is, of soft or softened—water, the next object is to secure a good soap. Several of the best known manufacturers of soap have exhibited here, but the newest exhibit is that of soft soap, called Apso (Francis Tucker and Co., Limited, Kensington, London). According to the report of Mr. R. H. Harland, public analyst, this soap contains only 0·02 per cent. of alkali. The Apso soap is said to have the advantage of being very cheap, and can be used for the washing of any fabric. In a bath it does not produce curds on the surface of the water, and is not irritating to the skin of the hands of laundresses. It is also alleged that it can with advantage be used for washing walls, doors, &c., as it does not injure oil paint.

For the washing of linen there are a large number of rotary tubs. In these steam, sometimes steam under pressure, is discharged. The tub turns round first in one and then in another direction, the linen inside being thus well shaken and beaten about. One of these, the "Renown," has the convenience of large doors for the inserting and taking out the linen; another, "The Composite," is strong and durable. The smallest size will take in seventy-five shirts and make 132 revolutions. Then there are a large number of hydro-extractors, in which the linen is whirled round with such velocity that the water is shaken out; and after these come the mangling and ironing machines. For ironing by machinery polished steel cylinders are disposed one above the other in the same manner as the rollers of a mangle. The insides of the cylinders are heated with steam. As the cylinders rotate they carry between them the objects to be ironed. But it sometimes happens that in pushing, or, rather, in inserting and guiding the linen through the cylinders the attendants advance their fingers too far forward, and thus have them caught, squeezed, and burnt. To avoid such accidents the "Reform" patent ironing machine is exhibited by Mr. T. W. Barber (165, Queen Victoria-street). It is provided with a safety feeding table, on which is placed a wooden roller in front of the steel rollers or ironers. The linen is put under the wooden roller, and this is not heavy enough to hurt the fingers. Thence the linen passes without the need of further handling to the steel ironing cylinders. Finally, there is the question of drying, and in this respect one of the most interesting exhibits is that of Messrs. Seagrave and Bevington's hot wind apparatus. Instead of mere heat in the drying-room this method provides a rapid current of hot air, so that the clothes are ventilated as well as dried, and thus secure the advantages which accrue from exposure in an open field. There is a fan to force cold pure air over hot steam tubes, and thence to the drying room, and another fan to extract the air. The rapidly flowing current of hot air removes the dampness, and dries and purifies the linen. This is certainly much more wholesome than the drying of linen in a chamber where the hot air is stagnant. Also, as a matter of health, where ironing is done by hand the electric ironer is much to be recommended. Like an electric lamp, it is connected by a wire to the electric current, which heats the inside of the iron. Thus laundresses need no longer suffer from the fumes and excessive heat of the stoves used for heating the irons. Altogether there is much to be seen at the exhibition that will tend to save the health and economise the labour of laundresses.

THE EPILEPTIC COLONY AT CHALFONT.

ON Wednesday last the foundation stone of the first permanent building of the Industrial Colony at Chalfont in Buckinghamshire, which has been founded by the National Society for the Employment of Epileptics, was laid by Mr. Passmore Edwards, whose munificence enabled the committee to secure and build on the present site. The good work aimed at by the society, whose office is at 12, Buckingham-street, Strand, has been referred to on several occasions in these columns. It will be remembered that the society first came before the public about eighteen months ago, when a meeting was held at the Mansion House, with the then Lord Mayor, Sir Stuart Knill, in the chair, and resolutions were passed, on the motion of distinguished men representing the Church, the Bar, and the medical profession, warmly commending the scheme to the charitable public. At this meeting the way was prepared for immediate action by the generosity of Mr. Passmore Edwards, who promised to buy a farm of suitable size and present it to the society. Such a farm of 135 acres has been purchased at Chalfont St. Peter's, Buckinghamshire, and is admirably adapted for the purpose in view. It is considerably more than 300 feet above sea level, in the midst of delightful rural scenery, and on a light soil which easily dries. A supply of pure water, which it is hoped will be ample both for domestic purposes and for irrigating the market garden when necessary, has been obtained by boring 140 feet into the chalk. Galvanised iron buildings were erected at once for the reception of patients, until a permanent home could be erected, and at the commencement of August the first colonist was admitted, and since then over a dozen have been residing there. The experimental stage, with the difficulties inseparable from it, having been successfully passed, the committee have been encouraged to proceed to the erection of permanent brick buildings. It is intended to avoid having one large institution, but rather to have a number of settlements, each of about twenty colonists, and it is the foundation stone of the first of these which was laid on Wednesday. A considerable party of ladies and gentlemen travelled from London to be present at the opening. Among those present were Dr. Buzzard, Dr. Ferrier, Dr. Savage, Dr. Fletcher Beach, Dr. Aldren Turner, Dr. James Taylor, Dr. Colman, Dr. Brooks, and other medical men who have taken an active part in promoting the foundation of the colony. Others had arranged to be present, but were deterred by the stormy condition of the weather. A short dedicatory service was conducted by the Rev. F. Woods, the rector of the parish, after which the stone was laid in position by Mr. Passmore Edwards. Tea was provided in the colony, which had been beautifully decorated with berries and autumn leaves by the lady superintendent, Miss de Lancy, and all the rooms were thrown open to inspection. The combined comfort and simplicity of the buildings, and the orderly internal arrangements, reflected the highest credit on the management of Miss de Lancy, and on the Ladies Committee which undertook the furnishing. Mr. Nicholls, the chairman of the Executive Committee, gave a graphic account of the history of the movement, and sketched out the future programme, with which it is intended to proceed as soon as funds are forthcoming, and which include separate provision in the neighbourhood for women and for children. Dr. Buzzard spoke of the encouraging results of the experiment even in so short a time, and the healthy appearance of the colonists surprised many of those who had seen them before their admission. In conversation with them we found them enthusiastic about the improvement in their own condition. We were informed by the physician who has visited the colony weekly during the last three months that in the case of the great majority of the colonists the improvement in their physical condition has been most striking, and, although the work at which they have been employed has been novel to them, they have shown an amount of energy and capacity which, although below that of a first-class gardener, surpassed expectation. Their fits have in almost all cases become less frequent, and in every case less severe. All the colonists are confirmed epileptics, with a history of frequent fits; but for four weeks not a single fit occurred during their working hours.

It is to be earnestly hoped that, now the colony is in working order, its usefulness will not be crippled for lack of funds. The money in hand will soon be exhausted by the expenses of building, &c., and unless the charitable public, and also public bodies, such as the board of guardians, come to the assistance of the society the much-needed extension of their work to epileptic women and epileptic children cannot be carried into effect. The School Board has recently been enabled to provide funds for the maintenance of the blind and deaf and dumb in suitable institutions, and this power might most usefully be extended

to the education of epileptic children, whom the authorities are often obliged to exclude from the ordinary Board schools. The Executive Committee includes physicians of the highest eminence, men of business, and others who have long been active workers in various departments of philanthropic work. The paid officials employed by the society may be counted on the fingers of one hand, and everything appears to have been done to ensure in as economical a manner as possible the lasting success of the movement, which must be of benefit, not only to the sufferers themselves, but to the community at large.

MUNICIPAL HONOURS FOR MEDICAL MEN.

THE occupant of the civic chair has many opportunities of improving the sanitation and ministering to the health of his borough; we are pleased to see, therefore, that some of the municipal authorities have selected as their chief magistrate a member of the medical profession.

Mr. Thos. W. Thursfield, M.D. Aberd., F.R.C.P. Lond., the new Mayor of Leamington, was educated at Aberdeen University, and was the first medical graduate of the New United Universities. In 1866, six years after taking his doctorate, he settled in Leamington, and in 1880 relinquished general practice. In 1881 he was elected physician to the Warneford, Leamington, and South Warwickshire General Hospital, and was chosen a Fellow of the Royal College of Physicians of London in 1889. He is a past president of the Birmingham and Midland Counties Branch of the British Medical Association, and is a member of the Royal Medical and Chirurgical Society, the Medical Society, and the Clinical Society. About sixteen years ago he entered public life as a member of the Free Public Library Committee of Leamington, and has been chairman of that committee for fourteen years. As a member of the town council he has served the town for twelve years, and is a magistrate for the county and for the borough.

Mr. J. H. Bartlett, M.D., M.R.C.S., &c., who has been elected Mayor of Ipswich, is honorary consulting surgeon to the East Suffolk and Ipswich Hospital and consulting physician to the Suffolk Provident Society. He is also one of the oldest members of the Ipswich Scientific Society, and is keenly interested in its proceedings.

Alderman Richard Daglish, J.P., M.R.C.S., &c., has again been elected to the office of Mayor of New Romney. New Romney was an unreformed borough until 1885, when a new Charter was granted. In that year Mr. Daglish was elected to the office of chief magistrate, re-elected in 1886, and elected in October, 1888, to take the place of a mayor who died during his year of office. In 1888 Alderman Daglish was re-elected, and again elected in the present year. He was appointed one of the first borough magistrates in 1885, and a county magistrate for Kent in June, 1886.

Mr. T. D. Harries, M.R.C.P. Lond., F.R.C.S. Eng., has been re-elected Mayor for the borough of Aberystwith. He is the senior practitioner in the town and an ardent sanitarian, and has given great attention to the prosperity of the town as a watering place. He has also been instrumental in obtaining for the town an abundance of pure water from the Plinlimmon range of mountains. Two years ago he brought forward a scheme for the electric lighting of the town, which has since been carried out. Mr. Harries is at present superintending the construction of a large pavilion in connexion with the pier and in laying out tea gardens and extensive pleasure grounds, and before the end of this, his second year of office, he will have the satisfaction of seeing the town of Aberystwith one of the best lighted, paved, and water-supplied in the kingdom.

Alderman R. Langford Jones, M.R.C.S. Eng. &c., has been unanimously elected Mayor for the borough of Bangor, North Wales. He is physician to the Carnarvon and Anglesey Infirmary and consulting physician to the Convalescent Home for Men, Llanfairfechan. He is also medical officer of health for the Beaumaris port sanitary authority.

Mr. R. Arthur Prichard, L.R.C.P. Edin., M.R.C.S. Eng., &c., who has been re-elected Mayor of Conway, is a Justice of the Peace and County Councillor for the borough.

Mr. E. Jepson, M.D. Durh., M.R.C.S. Eng., who has been chosen Mayor of Durham, was first elected a member of the Durham corporation in 1887 and was re-elected in 1890 and 1893. During the time he has been connected with the corporation he has taken a warm interest in all matters connected with the welfare of the city. In sanitary reforms he has been an active leader, and as a costly scheme of sewage disposal is now before the town the inhabitants are to be congratulated in securing as the occupant of the civic chair a member of the medical profession.

Mr. John Billingsley Richardson, M.D. Edin., L.R.C.P. Lond., &c., the Mayor of Torquay, was educated at Rugby School and Edinburgh University, where he graduated with honours in surgery as M.B. and C.M. in 1874. He then studied at St. George's Hospital, London, taking the Licentiateship of the College of Physicians of London. In 1875 he was appointed House Surgeon to the Torbay Infirmary, and in 1878 established a private practice at Lynstead, whence he removed to Torquay. He was one of the promoters of the Recreation Ground Company, and has greatly interested himself in municipal matters. He was elected on the local board in 1889 and again in April, 1892. Dr. Richardson, who is a Justice of the Peace for the borough, was one of the first to forward incorporation, and, being elected for Waldon at the first contest in 1892, was nominated an Alderman.

Mr. T. Hyde Mills, M.R.C.S. Eng., L.R.C.P. Lond., who has been chosen Mayor of Cambridge, came to that town in 1876. Since that time he has taken great interest in the public affairs of the town and has been active in promoting many good and philanthropic works. For two years he served upon the Board of Improvement Commissioners, and in November, 1890, entered the Town Council as a representative of the Market Ward, but under the Redistribution Scheme was allocated to St. Andrew's Ward, for which constituency he now sits upon the Council. He has always taken the keenest interest in the sanitary matters of the borough, and during the past three years has acted as chairman of the Sanatorium Committee and as a prominent member of the Sanitary Committee. Mr. Mills is also President of the Cambridge Medical Society. It is nearly fifty years since the borough of Cambridge was represented in the civic chair by a medical man.

Mr. A. M. Sculthorpe, L.R.C.P. Edin., L.M., M.R.C.S. Eng., &c., has been elected Mayor of Tamworth. He is district surgeon to the Midland Railway.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 8th inst., Mr. J. W. Hulke, F.R.S., President, in the chair.

Mr. Morton Smale was re-elected a member of the Board of Examiners in Dental Surgery.

The President reported the proceedings at the meeting of Fellows and Members on the 1st inst. and stated that, in addition to eighteen members of the Council, there were present twenty-two Fellows and thirty-seven Members.

The Council deferred the consideration of the first resolution passed at that meeting—namely, the one relating to the mode of election of the Council.

The second resolution, thanking the Council for the report and for the concessions relating to the separate meetings of the Fellows and of the Members, was acknowledged.

The President stated that Professor E. Treacher Collins would deliver three lectures on "The Anatomy and Pathology of the Eye" on Monday, Wednesday, and Friday, Dec. 3rd, 5th, and 7th next, at 5 P.M. each day, these lectures having been postponed from the last collegiate year.

The President also stated that the Bradshaw Lecture would be delivered by Mr. Oliver Pemberton on Wednesday, Dec. 12th next, at 5 P.M., the subject of the lecture being "James Syme, Regius Professor of Surgery in the University of Edinburgh, 1833-1869—a Study of his Influence and Authority on the Art and Science of Surgery during that period."

The President stated that three vacancies on the Court of Examiners would be occasioned by the expiration on Dec. 12th next of the period of office of Mr. John Langton, Mr. T. Pickering Pick, and Mr. Edmund Owen, and that these vacancies would be filled up at the ordinary meeting of the Council on Dec. 13th next.

A committee was appointed to consider the formulæ for

the proposed alterations in the by-laws, Sections 4, 16, and 25, relating to the mode of election to the Council and alterations in the fee for the Dental Diploma.

A letter was read from the Registrar of the Royal College of Physicians of London reporting the proceedings of that College relating to the following matters of common interest to the two Colleges—viz.: 1. A report of the Inspector of the General Medical Council on the examination of the two Colleges for the diploma in Public Health, which was received and referred to the Committee of Management. 2. The adoption of the report of the Committee of Management, dated Oct. 8th, 1894, and the re-election of Dr. Norman Moore as a member of that committee. 3. The adoption of the report of the Laboratories Committee, dated Oct. 5th, 1894, and the re-election of Dr. J. F. Payne as a member of that committee.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6531 births and 3388 deaths were registered during the week ending Nov. 10th. The annual rate of mortality in these towns, which had been 18·5 and 17·3 per 1000 in the preceding two weeks, further declined last week to 16·9. In London the rate was 15·0 per 1000, while it averaged 19·3 in the thirty-two provincial towns. The lowest rates in these towns were 11·8 in Birkenhead, 12·7 in Huddersfield, 13·0 in Croydon and in Leicester, and 14·0 in Halifax; the highest rates were 23·0 in Swansea, 23·5 in Gateshead, 24·1 in Sunderland, 24·3 in Burnley, and 24·8 in Preston. The 3388 deaths included 365 which were referred to the principal zymotic diseases, against 394 and 385 in the preceding two weeks; of these, 91 resulted from measles, 77 from diphtheria, 72 from diarrhœa, 58 from "fever" (principally enteric), 32 from whooping-cough, 30 from scarlet fever, and 5 from small-pox. No fatal case of any of these diseases occurred in Leicester or in Halifax; in the other towns they caused the lowest death-rates in Brighton, Croydon, and Cardiff, and the highest rates in Sunderland, Leeds, Wolverhampton, and Derby. The greatest mortality from measles occurred in Bradford, Gateshead, Derby, Leeds, and Portsmouth; from scarlet fever in Burnley; from whooping-cough in Newcastle-upon-Tyne and Sunderland; from "fever" in Sunderland and Wolverhampton; and from diarrhœa in Blackburn, Preston, and Derby. The 77 deaths from diphtheria included 42 in London, 7 in West Ham, 4 each in Wolverhampton, Liverpool, and Hull, and 3 in Birmingham. Four fatal cases of small-pox were registered in Birmingham and 1 in London, but not one in any other of the thirty-three large towns. There were 51 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 10th inst., against 60, 50, and 48 at the end of the preceding three weeks; 12 new cases were admitted during the week, against 8 in each of the preceding two weeks. There were 2258 scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on Saturday last, against 2214, 2285, and 2240 at the end of the preceding three weeks; 223 new cases were admitted during the week, against 261, 254, and 223 at the preceding three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 329 in each of the preceding two weeks, declined last week to 245, and were as many as 199 below the corrected average. The causes of 55, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Salford, Oldham, Bradford, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Huddersfield, Halifax, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding three weeks from 17·5 to 22·2 per 1000, declined again to 20·3 during the week ending Nov. 10th, but was 3·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·0 in Perth and 17·0 in Dundee, to 22·2 in Paisley and 25·0 in Greenock. The 578 deaths in these towns included 21 which were referred to diarrhœa, 16 to measles, 13 to diphtheria, 13 to whooping-cough, 10 to "fever" (principally enteric), 8 to scarlet fever, and 3 to small-pox. In all, 84 deaths resulted from these principal zymotic diseases, against 55 and 54 in the preceding two weeks. These 84 deaths were equal to an annual rate of 2·9 per 1000, which was 1·1 above the mean rate last week from the same diseases in the thirty-three large English towns. The 21 fatal cases of diarrhœa considerably exceeded the number recorded in any recent week, and included 8 in Glasgow and 4 in Edinburgh. The deaths from measles, which had increased from 3 to 9 in the preceding three weeks, further rose to 16 last week, of which 11 occurred in Glasgow and 3 in Aberdeen. The fatal cases of diphtheria, which had been 6 and 14 in the preceding two weeks, were 13 last week, of which 10 occurred in Glasgow. The 13 fatal cases of whooping-cough showed a further increase upon those recorded in recent weeks, and included 8 in Glasgow and 3 in Greenock. The deaths referred to different forms of "fever," which had risen from 2 to 10 in the preceding three weeks, were again 10 last week, of which 7 occurred in Glasgow, where 4 of the 8 fatal cases of scarlet fever were also recorded. The 3 deaths from small-pox were registered in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 114 and 144 in the preceding two weeks, further rose to 166 last week, and exceeded by 25 the number in the corresponding week of last year. The causes of 45, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 18·0 to 23·9 per 1000 in the preceding three weeks, declined again to 22·8 during the week ending Nov. 10th. During the past six weeks of the current quarter the death-rate in the city has averaged 22·0 per 1000, against 16·0 in London and 19·3 in Edinburgh. The 153 deaths registered in Dublin during the week under notice showed a decline of 7 from the number in the previous week, and included 12 which were referred to the principal zymotic diseases, against 16 and 11 in the preceding two weeks; of these, 4 resulted from small-pox, 3 from whooping-cough, 2 from "fever," 2 from diarrhœa, 1 from scarlet fever, and not one either from measles or diphtheria. These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 1·4 in London and 1·7 in Edinburgh. The fatal cases of small-pox, which had been 2, 4, and 1 in the preceding three weeks, rose again to 4 last week. The 3 deaths from whooping-cough exceeded the number recorded in any recent week. The deaths referred to different forms of "fever," which had been 3 in each of the preceding two weeks, declined to 2 last week. The 2 fatal cases of diarrhœa showed a further decline from the numbers recorded in recent weeks. The 153 deaths in Dublin last week included 36 of infants under one year of age and 35 of persons aged upwards of sixty years; the deaths of infants considerably exceeded those returned in any recent week, while those of elderly persons showed a decline. Five inquest cases and 4 deaths from violence were registered; and 52, or one-third of the deaths, occurred in public institutions. The causes of 15, or nearly 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1894.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during October in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 10·0 per 1000 of the population, estimated at 4,349,166 persons in the middle of this year. In the preceding three months the rates had been 9·4, 8·5, and 9·6 per 1000. Among the various sanitary areas the rates were considerably below the average in Hampstead, St. Giles, Strand, Holborn, St. Luke, and City of London; while they showed the largest excess in Limehouse, Mile End Old Town, Poplar, St. Saviour Southwark, Rotherhithe, Greenwich, and Plumstead. The prevalence of small-pox in London showed a further decline during October, 47 cases

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—OCTOBER, 1894.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1894.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	**4,349,166**	**47**	**1809**	**1216**	**4**	**469**	**19**	**22**	**564**	**1**	**4151**	**10·0**	**2**	**66**	**66**	**283**	**62**	—	**77**	**1**	**126**	**683**	**1·6**	**6598**	**15·8**	**143**
West Districts.																										
Paddington	121,583	6	23	54	—	7	1	1	17	—	109	9·4	—	2	—	8	1	—	—	—	4	15	1·3	148	12·7	92
Kensington	167,350	—	40	52	—	7	1	1	18	—	119	7·4	—	6	4	17	3	—	3	—	6	39	2·4	237	14·8	130
Hammersmith	105,696	—	33	25	—	8	—	1	3	—	70	6·9	—	1	—	9	1	—	1	—	—	19	1·9	148	14·6	161
Fulham	110,993	4	47	44	—	3	—	1	13	—	112	10·5	—	—	3	12	2	—	1	1	5	24	2·3	148	13·9	143
Chelsea	99,052	2	23	25	—	12	1	1	16	—	80	8·4	—	1	2	9	1	—	2	—	2	17	1·8	131	13·8	109
St. George Hanover-square	75,033	—	12	19	—	11	—	—	5	—	47	6·5	1	1	—	5	1	—	—	—	—	10	1·4	94	13·1	85
Westminster	54,414	—	13	12	—	5	—	—	3	—	33	6·3	—	1	—	4	1	—	—	—	1	8	1·5	87	16·7	144
St. James Westminster	23,571	—	2	6	—	5	—	—	3	—	16	7·1	—	—	—	2	—	—	2	—	—	4	1·8	36	15·9	174
North Districts.																										
Marylebone	138,554	13	40	22	1	20	1	—	30	—	127	9·6	1	—	1	2	3	—	2	—	3	12	0·9	216	16·3	144
Hampstead	75,443	—	22	9	—	5	1	—	4	—	41	5·7	—	1	—	—	1	—	—	—	—	2	0·3	54	7·5	72
St. Pancras	233,739	6	149	56	—	31	—	1	34	—	277	12·4	—	5	2	13	6	—	6	—	9	41	1·8	380	17·0	130
Islington	331,900	1	172	73	1	53	2	1	36	—	339	10·7	—	1	5	19	3	—	6	—	12	46	1·4	448	14·1	129
Stoke Newington	34,172	—	12	6	—	2	—	1	1	—	22	6·7	—	—	—	2	1	—	—	—	—	—	0·9	37	11·3	95
Hackney	211,493	—	83	62	—	31	2	1	23	—	202	10·0	—	11	3	12	—	—	8	—	4	38	1·9	262	12·9	116
Central Districts.																										
St. Giles	38,144	—	7	2	—	7	—	—	4	—	20	5·5	—	—	—	1	—	—	3	—	—	4	1·1	59	16·1	103
St. Martin-in-the-Fields	13,783	—	1	5	—	4	—	—	—	—	10	7·6	—	—	—	2	—	—	1	—	—	3	2·3	22	16·6	130
Strand	23,179	—	5	—	—	2	—	—	1	—	8	3·6	—	—	—	—	1	—	—	—	—	1	0·4	38	17·1	131
Holborn	32,438	—	4	5	—	1	—	—	5	—	15	4·8	—	—	—	2	—	—	—	—	1	3	1·0	69	22·2	200
Clerkenwell	65,312	—	24	11	—	7	1	—	13	—	56	8·9	—	—	2	3	—	—	1	—	—	6	1·0	110	17·6	114
St. Luke	41,168	—	6	3	—	1	—	—	11	—	23	5·8	—	3	2	2	2	—	1	—	3	13	3·3	102	25·8	133
City of London	34,832	—	5	5	—	4	—	—	3	—	17	5·1	—	—	1	—	—	—	2	—	—	3	0·9	58	17·4	164
East Districts.																										
Shoreditch	123,186	1	51	30	—	16	—	—	12	—	110	9·3	—	—	1	5	—	—	3	—	7	16	1·4	200	16·9	178
Bethnal Green	129,840	1	48	40	—	23	—	—	22	—	134	10·8	—	1	1	7	—	—	3	—	6	18	1·4	236	19·0	171
Whitechapel	75,498	1	27	16	—	5	—	—	13	—	62	8·6	—	—	1	9	2	—	1	—	—	13	1·8	134	18·5	146
St. George-in-the-East	45,360	1	16	11	—	7	—	—	4	—	39	9·0	—	—	—	3	1	—	1	—	1	6	1·4	74	17·0	127
Limehouse	57,000	—	38	27	—	4	—	—	6	—	75	13·7	—	—	2	9	1	—	—	—	5	17	3·1	141	25·8	207
Mile End Old Town	108,242	—	64	42	—	20	—	1	11	—	138	13·3	—	1	3	8	1	—	3	—	6	22	2·1	217	20·9	210
Poplar	170,217	—	87	72	—	37	3	—	30	—	229	14·0	—	—	4	10	1	—	3	—	6	24	1·5	284	17·4	164
South Districts.																										
St. Saviour Southwark	28,712	1	13	15	—	—	—	—	6	1	36	14·1	—	—	—	1	3	—	—	—	—	4	1·6	53	20·7	190
St. George Southwark	60,060	—	25	24	—	1	—	—	10	—	60	10·4	—	—	—	1	8	—	1	—	1	11	1·9	108	18·8	196
Newington	118,512	—	75	28	—	10	—	2	16	—	131	11·5	—	—	—	2	10	1	2	—	3	18	1·6	219	19·3	184
St. Olave Southwark	12,984	—	2	5	—	—	—	—	1	—	8	6·4	—	—	—	—	—	—	—	—	—	—	—	32	25·7	174
Bermondsey	84,053	—	56	9	—	4	—	1	6	—	76	9·4	—	—	—	1	4	—	1	—	10	16	2·0	143	17·7	166
Rotherhithe	40,365	2	56	17	2	2	—	—	12	—	91	23·5	—	—	—	1	2	—	—	—	1	4	1·0	70	18·1	162
Lambeth	282,574	1	140	59	—	29	5	1	26	—	261	9·6	—	2	6	13	7	—	5	—	4	37	1·4	407	15·0	129
Battersea	161,558	1	57	58	—	11	—	—	30	—	157	10·1	—	—	—	1	8	7	1	—	7	24	1·5	261	16·9	163
Wandsworth	179,518	—	50	39	—	13	—	4	23	—	129	7·5	—	—	2	5	1	—	—	—	2	10	0·6	221	12·8	119
Camberwell	248,893	1	82	110	—	23	—	3	33	—	252	10·6	—	3	4	31	4	—	6	—	5	53	2·2	392	16·4	170
Greenwich	173,128	2	93	61	—	24	—	—	31	—	211	12·7	—	11	3	17	5	—	5	—	5	46	2·8	239	14·4	107
Lewisham (excluding Penge)	79,903	2	29	17	—	7	1	—	20	—	76	9·9	—	7	1	1	1	—	—	—	—	10	1·3	129	16·8	144
Woolwich	42,309	—	11	11	—	1	—	1	4	—	28	6·9	—	—	1	1	—	—	—	—	—	2	0·5	53	13·1	60
Lee	38,172	—	22	6	—	1	—	—	1	—	30	8·2	—	4	1	2	—	—	—	—	—	7	1·9	41	11·2	85
Plumstead	59,233	—	42	23	—	3	—	—	3	—	71	12·5	—	4	4	3	3	—	—	—	—	14	2·5	60	10·6	97
Port of London	—	1	—	—	—	2	—	—	1	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 58 cases of membranous croup.

† Including deaths from membranous croup.

being notified during the month, including 13 in Marylebone, 6 in Paddington, 6 in St. Pancras, and 4 in Fulham sanitary areas. The Metropolitan Asylum Hospitals contained 45 small-pox patients at the end of October, against 187, 151, and 93 at the end of the preceding three months; the weekly admissions averaged 9, against 47, 34, and 17 in the preceding three months. The prevalence of scarlet fever in London showed a very slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in St. Pancras, Limehouse, Mile End Old Town, St. Saviour Southwark, Newington, Bermondsey, Rotherhithe, Lee, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 2207 scarlet fever patients at the end of October, against 2153, 2082, and 2058 at the end of the preceding three months; the weekly admissions averaged 246, against 256, 214 and 245 in the preceding three months. The prevalence of diphtheria showed a slight further increase upon that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Limehouse, Mile End Old Town, Poplar, St. George Southwark, Rotherhithe, Camberwell, and Plumstead. There were 537 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of October, against 435, 450, and 496 at the end of the preceding three months; the weekly admissions averaged 100, against 88, 80, and 98 in the preceding three months. The prevalence of enteric fever showed a marked further increase upon that recorded in recent months; among the various sanitary areas this disease was proportionally most prevalent in St. Giles, St. Martin-in-the-Fields, Bethnal Green, Mile End Old Town, and Poplar. Erysipelas showed the highest proportional prevalence in Marylebone, St. Luke, St. Saviour Southwark, Rotherhithe, and Lewisham sanitary areas. Four cases of puerperal fever were notified in Wandsworth, 3 in Camberwell, and 2 in Newington sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, Nov. 3rd, the deaths of 6598 persons belonging to London were registered, equal to an annual rate of 15·8 per 1000, against 16·2, 16·0, and 14·4 in the preceding three months. The lowest death-rates during October in the various sanitary areas were 7·5 in Hampstead, 10·6 in Plumstead, 11·2 in Lee, 11·3 in Stoke Newington, 12·7 in Paddington, 12·8 in Wandsworth, and 13·1 in St. George Hanover-square and in Woolwich; the highest rates were 19·3 in Newington, 20·7 in St. Saviour Southwark, 20·9 in Mile End Old Town, 22·2 in Holborn, 25·7 in St. Olave Southwark, and 25·8 in St. Luke and in Limehouse. During the five weeks of October 683 deaths were referred to the principal zymotic diseases in London; of these, 2 resulted from small-pox, 66 from measles, 66 from scarlet fever, 283 from diphtheria, 62 from whooping-cough, 77 from enteric fever, 1 from an ill-defined form of "fever," and 126 from diarrhœa. These 683 deaths were equal to an annual rate of 1·6 per 1000, against 3·2, 3·1, and 1·9 in the preceding three months. No fatal case of any of these diseases was recorded last month in St. Olave Southwark; in the other sanitary areas they caused the lowest death-rates in Marylebone, Hampstead, Stoke Newington, Strand, City of London, Wandsworth, and Woolwich; and the highest rates in Kensington, Fulham, St. Martin-in-the-Fields, St. Luke, Limehouse, Greenwich, and Plumstead. Only 2 fatal cases of small-pox were registered in London during the month under notice, the corrected average in the corresponding periods of the preceding ten years being 8; of these 2 deaths, 1 belonged to St. George Hanover-square, and 1 to Marylebone sanitary areas. The 66 deaths referred to measles were considerably less than half the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. Luke, Greenwich, Lewisham, Lee, and Plumstead. The 66 fatal cases of scarlet fever were as many as 79 below the corrected average number; this disease was proportionally most fatal in Plumstead sanitary area. The 283 deaths referred to diphtheria exceeded by 103 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Kensington, Fulham, St. Martin-in-the-Fields, Whitechapel, Limehouse, St. Saviour Southwark, St. George Southwark, and Camberwell. The 62 fatal cases of whooping-cough were little more than half the corrected average number; there was no marked excess of mortality from this disease during last month in any of the sanitary areas. The 78 deaths referred to different forms of "fever" were 16 below the corrected average number; this disease was proportionally most fatal in St. Giles sanitary area. The 126 fatal cases of diarrhœa were 78 below the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was nearly 25 per cent. below the average.

Infant mortality in London during October, measured by the proportion of deaths under one year of age to registered births, was equal to 143 per 1000, and was slightly below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, St. George Hanover-square, Hampstead, Stoke Newington, Woolwich, Lee, and Plumstead; and the highest rates in St. James Westminster, Holborn, Shoreditch, Limehouse, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and Newington.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN SCOTT has been posted to Jersey on return from service abroad, Surgeon-Major Barnes to Hounslow, and Surgeon-Captain Hennessy to Birr. The following officers have embarked for service in India:—Surgeon-Major Rowney, Surgeon-Captains Davis, Blackwell, Le Quesne, and Surgeon-Lieutenant Thompson. Brigade-Surgeon-Lieutenant-Colonel Lyons has left for Malta, Surgeon-Captain Meek for Barbadoes, and Surgeon-Captain Elderton for Jamaica. The following officers have arrived from India in the *Malabar*:—Surgeon-Lieutenant-Colonel Slaughter, Surgeon-Major Flanagan, and Surgeon-Captains Aldridge and Wright.

ARMY MEDICAL STAFF.

Surgeon-Major Charles Henry Swayne to be Surgeon-Lieutenant-Colonel. Surgeon-Lieutenant William Phayer Ryall resigns his commission. Surgeon-Captain J. Fayrer, M.D., has been selected for duty with the Royal Horse Guards, vice Surgeon-Captain Forrester, promoted into the 1st Life Guards.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—3rd Bengal Cavalry: Surgeon-Lieutenant F. S. Peck to the Officiating Medical Charge of the Regiment. 11th Bengal Infantry: Surgeon-Lieutenant Rogers, from the officiating medical charge of the 7th Bengal Cavalry, to the Officiating Medical Charge of the Regiment. Surgeon-Major G. Brazier Creagh has been posted to Umballa as Senior Medical Officer. Surgeon-Major D. Elcum is appointed to be Superintendent, Lunatic Asylum, Madras. Surgeon-Major W. H. Thornhill, M.D., is appointed to be District Medical and Sanitary Officer and Superintendent of the Gaol, Nellore. Brigade-Surgeon-Lieutenant-Colonel John Burke Gaffney, I.M.S., Civil Surgeon, Jubbulpore, and Surgeon-Lieutenant-Colonel Andrew McMaster Paterson, I.M.S., 1st Battalion, 2nd (Prince of Wales's Own) Gurkha Rifle Regiment (the Sirmoor Rifles), retire from the service.

NAVAL MEDICAL SERVICES.

Inspector-General of Hospitals and Fleets Charles Henry Slaughter has been placed on the Retired List. The following appointments are notified:—Surgeons: P. N. Randall, M.B., to the *Beagle*, and H. B. Beatty, to the *Pembroke*.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant-Colonel G. Mitchinson, 3rd Battalion, the Lincolnshire Regiment, retires under the provisions of Paragraph 82 of the Militia Regulations, 1894, with permission to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Leicestershire Regiment: Surgeon-Captain R. B. Smith, to be Surgeon-Major. 3rd Glamorgan: Surgeon-Lieutenant R. N. Jones resigns his commission. 2nd Volunteer Battalion, the Oxfordshire Light Infantry: Surgeon-Lieutenant J. O. Sankey, to be Surgeon-Captain. 2nd Volunteer Battalion, the Essex Regiment:

Surgeon-Captain C. E. Abbott, to be Surgeon-Major. 1st Volunteer Battalion, the Northamptonshire Regiment: Edward Percival Dickin, M.D., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies: Surgeon-Lieutenant J. G. Graham, M.B., to be Surgeon-Captain.

THE ARMY REORGANISATION SCHEME FOR INDIA.

The *Times of India* of the 27th ult. has a long article upon the new army reorganisation scheme for that country. The Governor-General's order, with the subsidiary order by the Commander-in-Chief, is to be issued immediately. The Madras and Bombay Armies Act comes into force on April 1st next. Under the new organisation the army of India consists of the following commands:—Punjab, Bengal, Madras, and Bombay, each under a lieutenant-general. The first and second-class districts remain with their staffs unchanged, Quetta alone going to the Bombay command, and Burmah remaining with Madras. To each command a principal medical officer, with a personal professional assistant, is allotted. One of the secretaries to the principal medical officer with H.M.'s Forces in India at headquarters will be abolished. All appointments in the medical and other departments will be made under the existing rules. The principal medical officer with H.M.'s Forces in India and the principal medical officers of commands and districts, if of the Army Medical Staff, will be appointed by H.R.H. the Commander-in-Chief, and officers of the Indian Medical Service by the Government of India.

DEATHS IN THE SERVICES.

Inspector-General B. W. Marlow, M.D., C.B., at Alverstoke, Hants, on the 7st inst., aged seventy-four. He attained the rank of Deputy-Surgeon-General in 1870. For his services during the Eastern Campaign of 1854–55 he received the war medal with three clasps and the Turkish medal. He was also a Knight of the Legion of Honour.—Fleet-Surgeon Martin Magill, M.D. St. And., F.R.C.S. Eng., died on the 1st inst. He became surgeon in the Navy in October, 1856, was promoted staff-surgeon in March, 1867, and retired as fleet-surgeon in June, 1881. He served as staff-surgeon to the *Orontes* during the war against the Zulus in South Africa of 1877 to 1879, receiving the Zulu medal.

MALARIAL FEVER IN CALCUTTA.

There appears to be a somewhat unusual prevalence of malarial fever at the present time in Calcutta. The number of admissions from this cause into the hospitals of that city has been very large of late. The type of fever is described as severe, the fever temperature being high and many of the patients during the cold stage suffer from abdominal cramps and a more or less collapsed condition.

The *Malabar* arrived at Portsmouth from Bombay on the 12th inst. with 118 invalids for Netley.

The hired transport *Dilwarra* sailed from Bombay on Oct. 25th with 246 patients for Netley.

The proceeds of the Carnival recently held at Aldershot in aid of the proposed hospital amounted to £321.

It has been suggested that the services rendered by the Shropshire Light Infantry in stamping out the plague at Hong-Kong should be recognised by the presentation of a piece of plate to the regiment, and that the soldiers should each receive a medal, but for this the sanction of the War Office must be obtained.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—On Nov. 7th the President, Dr. Tew, delivered an introductory address from the chair on Some of the Legal Responsibilities of Medical Men. The question of administering the oath previously to giving evidence was dealt with at some length, and the forms adopted in various countries were described. The Oaths Act was considered to meet all present day requirements. Swearing with the uplifted hand was considered preferable to the usual method of kissing the Book. Any method of judicial swearing should be allowed which is not ridiculous in performance or repugnant to the feelings—religious, racial, or otherwise—of those about to make such important judicial statements as medical witnesses were called upon to do. He also spoke on the subjects of death certification and the giving of evidence before the coroner or in the law courts.

Correspondence.

"Audi alteram partem."

"THE POSITION OF THE THEORY OF EVOLUTION."

To the Editors of THE LANCET.

SIRS,—I trust you will allow me some of your valuable space to reply to Dr. Kidd's rather vaguely expressed dubitations as to the credibility of the doctrine of evolution. In a matter of this sort, of course, no one will expect categorical proof; it is merely a question as to whether the general drift of our knowledge points in this direction or not. The unanimity with which the various branches of science have one after another independently adopted this doctrine, so that it now dominates the whole range of science, is certainly a very remarkable phenomenon. From it we may infer that the grand problem suggested by the study of nature has never before been so well explained. This is the sole *raison d'être* of the doctrine of evolution—and it is sufficient. We need not bother ourselves about its consequences. Once established, a theory of this kind will always be believed until it can be shown to be false or until something better has been devised. At present I fail to see any indications of this kind; on the contrary, the progress of knowledge is constantly revealing new facts which tend but to confirm it. It would be very strange if a doctrine so far-reaching in its effects, after having revolutionised the rest of biology, failed to make its influence felt in pathology. As a matter of fact, however, not much progress has yet been made in this direction. The reason for this is the extremely backward state of pathology, which still lags far behind any other branch of natural science. We are indebted to Herbert Spencer for pointing out that there are three grades of knowledge: (1) knowledge of the lowest kind, which consists of isolated facts, or *un-unified* knowledge; (2) science, or *partially unified* knowledge; and (3) philosophy, or *completely unified* knowledge. What makes modern English pathology so sterile and insignificant is that it has failed to rise above the level of the lowest of those grades. In this respect the Germans are far in advance of us. For many years they have been steadily unifying their pathological data, and they now have accumulated an unrivalled stock of partially generalised knowledge, which will be of immense service when the time comes—as come it assuredly will—for making still wider generalisations. In this country the *Centralblatts* and *Jahrbüchers* of the Germans have no counterparts. Anyone who will compare the matter published in the transactions of our medical societies and journals with that which appears in corresponding German works will at once see how deficient the British publications are.

Buckle, one of the greatest of modern English thinkers, has expressed himself on this subject as follows:—

"Our scientists display an inordinate respect for experiments, an undue love of minute details, and a disposition to overrate the invention of new instruments and the discoverers of new but often insignificant facts. ..... We are in that predicament that our facts have outstripped our knowledge and are now encumbering our march. The publications of our scientific institutions and of our scientific authors overflow with minute and countless details, which perplex the judgment, and which no memory can retain. In vain do we demand that they should be generalised and reduced into order. Instead of that, the heap continues to swell. We want ideas and we get more facts."

Viewing the matter in this light, it seems to me that in his recent address on "Scientific Temper" Sir J. Paget struck a false note when he urged his hearers not to think, but to seek out facts. It is quite certain that Hunter, to whose example he appealed, owes his great influence with us, not to the new facts he discovered, but to the new ideas he promulgated. English pathology is languishing to-day, not for the want of facts, but for the want of the necessary intellect to interpret them. The student's head must be spherically expanded. There is no need to urge the accumulation of facts in such times as we are now living in—these are certain to be produced in the greatest abundance; but what is sadly needed is the mental aptitude necessary for their proper comprehension. What more than anything else has contributed to the present deplorable condition of our medical science is

the pernicious custom of filling all the chief offices connected with our hospitals and medical schools with men whose sole distinction is that they have passed difficult examinations, and who subsequently devote most of their time to teaching others to do likewise. For work of this sort no intellect is required. The whole art of passing examinations is simply a parrot-like trick of the memory, and what is thus acquired is not real knowledge, but merely a fraudulent imitation thereof. The pungent lines of Voltaire rise up in my mind:—

"Eh quoi! vous ne ferez nulle distinction
Entre l'hypocrisie et la dévotion.
Vous les voulez traiter d'une semblable langage
Et rendre même homage au masque qu'au visage?"

If the credit of the English schools is not altogether to pass away from them, the present iniquitous system of making hospital appointments must be abandoned, and men of a higher grade of intellectual capacity must be substituted.

I am, Sirs, yours truly,

Preston, Nov. 4th, 1894. W. ROGER WILLIAMS.

"THE ETIOLOGY OF TYPHOID FEVER."

To the Editors of THE LANCET.

SIRS,—This question is one of great importance to health officers and others interested in the causation of disease; but much more important to them is the study of the way or ways by which the disease is communicated from one person to another. In taking part in this discussion I do so solely from the epidemiological point of view, as I am not competent to discuss it from the bacteriological standpoint.

For ten years before I came to practise here in Rome I acted as deputy for Mr. Jacob, medical officer of health of the Surrey Combined Districts. During that time I had very many opportunities of investigating outbreaks of typhoid fever and the other infectious diseases in isolated cases as well as in epidemic forms in towns and country districts. I quite agree with Dr. Kenwood that in a large number of cases of typhoid fever one has to investigate we cannot trace the direct source of infection; but we find this also in diphtheria, small-pox, scarlet fever, and other infectious diseases. If, therefore, we agree with Dr. Kenwood that after the most careful investigation of all the known means of communicating typhoid fever from one individual to another, we cannot trace it immediately or mediately to a previously existing case, it must arise *de novo*. Why should we not believe, reasoning in the same way, that diphtheria, scarlet fever, measles, and all the other infectious diseases arise *de novo*? I do not know whether Dr. Kenwood admits this, but to be logical he ought to do so. I certainly do not admit it. On the contrary, I believe that typhoid fever is produced only by the admission of the typhoid germs into the organism, and consider that whenever we are unable to trace the medium through which these microbes obtained their admission it is much more reasonable to believe that we either have not succeeded in thoroughly investigating every source of infection from a previous case, or, more probably, that we have not yet complete knowledge of the various media by which the disease is communicated from one person to another, than to accept the *de novo* origin of the disease.

The human mind, as a rule, is only too apt to rush to conclusions on insufficient data, and I am afraid that our investigations of disease causation are not exceptions to this rule. At any rate, much stronger evidence must be brought forward than there has been up to the present before I shall believe in the *de novo* origin of typhoid fever or any disease of its kind. To my mind, it is as difficult to accept this theory as it is to believe in abiogenesis.

I am, Sirs, yours faithfully,

JOHN J. EYRE, M.R.C.P. Irel., D.P.H. Cantab.

Piazza di Spagna, Rome, Nov. 7th, 1894.

DEATHS UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—There appears of late to have been an increase rather than a decrease in the number of deaths under chloroform, cases being from time to time reported in THE LANCET and comments made thereon. The question, however, as to whether it is ever necessary, and, if not, whether it is justifiable, to give chloroform does not appear to have had due consideration. I maintain that it is never necessary to use pure chloroform as an anæsthetic, and that when used it should be mixed with ether. The most satisfactory combination, so far as my experience goes, is a mixture of equal parts of chloroform and ether. The advantages of this mixture are the following. 1. The ether acts as a stimulant, counteracting the depressing effects of the chloroform on the heart. (That chloroform has a depressing effect on the heart is a clinical fact, whatever the results of the Hyderabad experiments may attempt to prove.) 2. During the commencement of the administration and during the struggling stage the patient is chiefly breathing ether, and so the initial dangerous period of chloroform administration is tided over. 3. During struggling, for the above reason, the anæsthetic can be pushed with much more safety than can chloroform alone. 4. For the same reason there is less shock in those too frequent cases where the surgeon commences to operate before the patient is ready.

The only disadvantages are—(1) that about two or three times as much anæsthetic is used; and (2) sometimes rather profuse salivation is excited. These are, however, trivial points compared with the greater safety of the mixture over chloroform. I am well aware that the mixtures of chloroform and ether in various proportions have been used for some considerable time. The point I wish to urge is that there is never any occasion to use chloroform except in the form of a mixture with ether, and, therefore, that the use of chloroform by itself should be altogether abolished.

I am, Sirs, yours truly,

C. F. MARSHALL, M.D., F.R.C.S.,
Late Anæsthetist to the Hospital for Sick Children,

Nov. 13th, 1894. Great Ormond-street, W.C.

"THE TEACHING OF CHILDREN'S DISEASES AT GENERAL HOSPITALS."

To the Editors of THE LANCET.

SIRS,—Dr. McCaw's friendly criticism of my letter calls for but slight answer from me. Whilst we are thoroughly agreed as to the necessity for further teaching and study of children's diseases on the part of the student, we are at variance as to the method to be employed for gaining these ends. Dr. McCaw considers that my suggestion of appointing a special physician for children's diseases on the staff of each general hospital, if adopted, would add to the labours of the already over-burdened student. I cannot, however, see how his plan of professorial lectures with enforced attendance at a children's hospital is in any way an improvement on mine in the way of lightening these burdens. The two methods, in fact, are essentially the same, with the single exception that in my method the student has the tuition he has a right to expect afforded within the walls of his own hospital. With Dr. McCaw's alternative one the student is compelled to travel, perhaps some distance, to obtain it. I do not believe, moreover, that the student would find the proposed children's department an incubus. On the contrary, I believe such a department would come to be the most popular one in the hospital, and one in which the student might profitably increase his knowledge of adult diseases by studying them in the child. There are no grounds for any accusation against me for attempting to magnify the importance of a narrow speciality, for "speciality" is a curious term for a subject that will form more than half the practice of most qualified men. The time will come, too, when examining boards will realise this fact; and when children's diseases meet with due recognition on their part the teaching authorities at general hospitals will have to move in the matter. With improved conditions in this respect one may expect some utility in holding inquests on infants, in that some other verdict than the stereotyped one, "Death from convulsions," may occasionally be returned, and that there will cease to be any justification for such a sentence as "practitioners only too often find more employment for their grim lancets than for their common sense."

I am, Sirs, yours faithfully,

Upper Berkeley-street, Nov. 12th, 1894. J. A. COUTTS.

"CREAMERIES AND INFECTIOUS DISEASES."

To the Editors of THE LANCET.

SIRS,—I have read with great interest Dr. Welply's former and latter articles on "Creameries and Infectious Diseases."[1]

[1] THE LANCET, April 21st and Nov. 10th, 1894.

The subject appears to be an important one and to merit close attention. The evidence connecting the typhoid epidemic Dr. Welply described with the distribution and use of the suspected milk was very conclusive, and, bearing in mind two points—first, that the collecting, mixing, and distribution of milk by creameries are likely to be further practised in the future; and, secondly, that not alone typhoid fever, but also numbers of other diseases, may thus be scattered widely among all classes—remembering these, the matter certainly calls for immediate attention. In this country we frequently punish those who, aware of the presence of infection in their houses, expose themselves to the public in such a way as to encourage the spreading of the disease; yet it now clearly appears that milk may be sent from an infected dairy farm to a creamery to be mixed with, presumably, pure milk, and the infected mixture then redistributed. And this not merely when—and because—the disease has rendered the farm hands themselves incapable of manipulating the milk, but—still more astounding—when its infective power is shown by its eproducing the disease in three members of a household of seven, the remaining four refusing the milk and escaping. This case (No. 2 of Dr. Welply's latter paper) is certainly most striking, and I trust public attention will be at once directed to the whole subject —I am, Sirs, yours faithfully,

Liverpool, Nov. 12th, 1894. EDWARD J. WALKER, M.D.

"THE REMUNERATION OF MEDICAL WITNESSES."

To the Editors of THE LANCET.

SIRS,—In the autumn of 1872 I was asked by the late Mr. W. B. Kilburn of West Auckland to assist him in the exhumation of certain bodies, victims of poison. They had been buried in a country churchyard where, owing to the large number of deaths in this place from enteric fever and small-pox, the sexton had no idea—the graves were not numbered—who the occupants of the graves were. Four bodies were wanted, three only could be found, and to find these about forty graves had to be opened. When found the examination of the bodies had to be made, the viscera placed in certain vessels, and then we had to see the bodies interred again. I need hardly tell your readers what a repulsive task this was—it is sufficient to say that one body had been buried nearly twelve months. No puerperal cases could be attended while we were thus engaged, and it was some days before the peculiar smell left our hands, in spite of disinfectants and many daily scrubbings. For all this work Mr. Kilburn received the usual post-mortem fee—three exhumations, three guineas. The Home Secretary was certainly memorialised, and the character of the work, arduous and repulsive as it was, placed before him, but to a plea for special consideration a deaf ear was turned, and not one halfpenny more could be obtained. It is time something was done. We all know well how disagreeable it is to hang about assize courts, and, as Dr. Hair tells us, better fees are paid in Scotland. Why should not the scale of fees be raised here?

I am, Sirs, your faithfully,

Peterborough, Nov. 13th, 1894. W. EASBY, M.D.

To the Editors of THE LANCET.

SIRS,—In addition to proper remuneration I think a suitable waiting-room should be provided at the courts in large towns for medical witnesses, and so enable them to employ their time while waiting in reading, writing, or other profitable employment, which under present circumstances is impossible. I consider matters are as bad regarding post-mortem examinations. Surely 21*s.* are little enough for the mechanical work of opening and closing the three cavities, let alone the skill required and risks to self, and to others if the practitioner is attending midwifery. Distance also, which entails loss of time and travelling expenses, makes things worse, and in criminal cases a professional assistant, if only to take notes, is essential. At my last post-mortem examination the assistant's fee (10*s.* 6*d.*, his and my own travelling expenses (four miles from my home), and other small but necessary expenses amounted to 19*s.* 6*d.*, leaving 1*s.* 6*d.* for over six hours' hard work and the risks alluded to. For the 21*s.* for giving evidence I had another four miles' journey as well as to wait nearly four hours. This is by no means a solitary experience on my part. Could not post-mortem examinations be made by medical officers of health (not practising) who do not attend midwifery or perform surgical operations, and whose time is more at their disposal than that of ordinary practitioners? Would it not be profitable to medical officers, practitioners, and the general public if all post mortem examinations could be made by the first named?

I am, Sirs, yours truly,

HENRY PILKINGTON, M.R.C.S. Eng. &c.

Stanley-street, Ormskirk, Nov. 13th, 1894.

PENSIONS TO POOR-LAW MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—As secretary of the Poor-law Medical Officers' Association allow me to remind its members through your columns that the chance of getting compulsory superannuation is not yet dead while we have such a liberal and progressive Government and such a genuine medical ally and reformer as Sir Walter Foster as Secretary of the Local Government Board. It therefore behoves us to be up and doing, and by meetings, petitions, and deputations to strengthen the hands of the Government in granting us this much-needed and wished-for boon. I shall be glad to receive petitions, suggestions, or any communications relating to the superannuation question prior to holding a general meeting on the subject, the date of which will be duly announced.

I am, Sirs, yours truly,

J. WICKHAM BARNES,

Hon. Secretary to the Poor-law Medical Officers' Association

3, Bolt-court, Fleet-street, Nov. 14th, 1894.

"A CONDEMNED BIBLE."

To the Editors of THE LANCET.

SIRS,—It is very satisfactory to see that the danger of syphilis being communicated from one witness to another has been recognised by Mr. Justice Collins, as shown in your annotation in the last issue of THE LANCET; but I cannot help feeling both surprised and sorry that so few medical witnesses avail themselves of the "new" or "Scotch" oath, as it is variously termed. So far back as 1885 medical witnesses have objected to kiss the Book on the grounds of possible infection, and when the objection could not be sustained by the bench the Book had to be kissed by the unwilling witness. But now anyone taking the oath under any circumstances may claim to be sworn with uplifted hand, and so be exempt from kissing or even touching the Book at all. This has been the law for nearly six years, and yet here in the north those who avail themselves of it are nearly all medical witnesses, and may be counted on the fingers. It is useless waiting for any reform to come from the bench: it must come from those who have to take the oath—jurors, witnesses, interpreters, bailiffs, and others. If more medical witnesses would set the example it would, I am sure, spread to the jury-box. While I write the assizes are sitting in many parts of the kingdom, and the time for ventilating the subject is opportune. It is not merely the risk of infection—though this is by no means chimerical,—it is handling and kissing a dirty book which has been indiscriminately used for an unknown period and by an unknown number of persons. Many medical witnesses have told me that they avoid kissing the Book—only pretending to do so; but surely it is more honest to take an oath in such a manner that one need not be ashamed of? And handling the Book is little less objectionable (under the circumstances) than kissing it. Our grand juries at assizes are gentlemen of refined tastes and cultivated minds, who, in other matters, might be expected to regulate fashion. If the example were set more generally by members of the medical profession, who are now more often called upon to take the oath than any other body of men, it would extend to grand juries, from them to special and common juries, and gradually to all witnesses. I would add, in conclusion, that the oath with uplifted hand is much more solemn, more impressive, and more simple in form. It ought to be used by children, but this can only be when their elders and betters set them the example.

I am, Sirs, yours faithfully,

Liverpool, Nov. 13th, 1894. A MEDICAL WITNESS.

AN IMPORTANT ENQUIRY.

To the Editors of THE LANCET.

SIRS,—Are all district medical officers disqualified for being elected as parish councillors? If so, can the disqualification be in any way removed?—I am, Sirs, yours truly,

Nov. 10th, 1894. N. B.

*** The point is dealt with in Section 46 of the Local Government Act, 1894, which states that "a person shall be disqualified for being elected or being a member or chairman of a council of a parish or of a district other than a borough or a board of guardians if he".....(*d*) holds any paid office under the parish council or district council or board of guardians, *as the case may be*." The words which we have printed in italics clearly refer to the first paragraph of the section quoted; and it is, we think, clear that the holder of a paid office under a board of guardians is not thereby disqualified from being a member of a parish council. The disqualification applies to holding a paid office, and serving as a member on one and the same body, "as the case may be."—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Medical Members on the City Council.

FOR some time past the air has been charged with electioneering electricity, first as regards the vacancies on the council, and secondly as to the School Board. The first contest has happily gone by without serious results; with the second we are not directly concerned, for there is no contention as to the sanitary requirements of the schools, except, perhaps, on the question of free meals for the children. It is satisfactory to know that the six medical men retain their seats on the council. It was thought that a seventh had a good chance of being returned for one of the recently incorporated townships, but he was defeated by a Labour candidate. The council numbers 104, so that 6 per cent. are medical men and ought to have considerable influence on sanitary questions.

Adulteration of Food, Drugs, &c.

An interesting table is appended to the report of the Sanitary Committee of the council, showing the percentage of adulteration discovered each year since the Act came into force on May 1st, 1873. In that year—1873-74—it was 33·33 per cent. In 1883-84 it had fallen to 14·4 and in 1893-94 to 6·5 per cent. But while six articles only were examined in the first year, 595 were examined in 1883-84, and 1644 in the last year. The selection made is curious, and in some things seems haphazard—e.g., one specimen of jam was examined the first year and found adulterated, and one the year after, which proved satisfactory. Then a period of seven years elapsed before any more were tested, but in 1882-83 nine samples were taken, and a few each year since. It is satisfactory to find they all proved genuine, contrary to the idea of many as to bought jam. Milk comes in for the greatest share of attention, and adulteration has declined very considerably since 1873-74, when two samples were examined, one of which (50 per cent.) was adulterated. The greatest number of samples (1297) was examined in 1889-90, when 7·5 per cent. were faulty. Last year (1893-94) 1048 were examined and 5·6 were adulterated. The fraudulent samples have never fallen below 4·9 per cent. Up to 1888-89 adulteration was much more frequent than it has been since, and the average for the fifteen years was over 23 per cent. Since that year it has been a little over 5½ per cent. Great improvement has taken place as to bread, and for the last dozen years it has been free from adulteration. Butter, on the other hand, keeps up its reputation as a much-injured article. Of 138 samples examined in 1893-94, 19·5 per cent. were adulterated. In the previous year the percentage was 31·7, in 1884-85 it was 64·2, and the year before that 86·3. Whether the adulteration consists of foreign fats or of added water is not stated. As to the former, all are agreed that it is fraudulent, but there is some difference of opinion, even among experts, as to the percentage of water to be found in the best butter. Mustard is often adulterated. The most frequent contamination of mineral waters is from slight traces of lead, as happened in forty-eight cases out of eighty-four examined. "In each of these cases the manufacturers were communicated with, and steps were taken by them to prevent a recurrence of the contamination." One inference may fairly be drawn from this table: that frequent examinations notably lessen adulteration.

Memorial to the late Professor Milnes Marshall.

The sum of £783 10*s.* 3*d.* has been raised for the fund in memory of the late Professor Marshall, and after expenses £760 2*s.* 3*d.* will be left. Of this sum £650 have been invested in Manchester Corporation Stock to provide for the maintenance of the Marshall Biological Library given to the Owens College by the relatives of Professor Marshall, while £102 8*s.* 6*d.* have been similarly invested to provide a "Marshall Gold Medal" to be annually competed for at the Owens College athletic sports. The balance (less the expenses of the investments) has been handed to the College to be applied as income for the purposes of the library.

Manchester Medical Society.

A meeting of this society was held on Nov. 7th, Dr. J. Dixon Mann, President, being in the chair. Mr. Colin Campbell showed a patient aged forty-eight, whose right breast he removed for Scirrhus in 1887 and whose axillary glands were excised a year later.—Dr. Moritz showed a case of Sarcoma of the Tonsil and Upper Jaw, in which considerable improvement had followed injections three times a week of saturated solution of the yellow pyoktanin (auranin).—Dr. Ashby read a paper on the Etiology of Scurvy Rickets. Upwards of thirty cases observed by him had been mostly fed with pancreatised milk, but none with breast milk. He emphasised the fact that the symptoms had developed while the patient was taking fresh boiled milk.

Nov. 13th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Dangers of Enamel Workers.

AN inquest was held on the 6th inst. on the body of a girl aged sixteen years, whose death occurred as the result of working in lead at the Imperial Enamel Company. Evidence was given to show that the deceased was in good health before commencing the work some twelve months before. It was found that, though several of the girls at the same works had been ill, none of them had seen a medical man as required by the Act. Some misunderstanding had existed as to the time when the notification was to come into force. The provision of a monthly inspection by a medical man as required would probably have obviated the death of the deceased, who was described as a careful, steady, and industrious worker. The blame is all the greater from the omission of proper precautions, and the censure of the jury upon those responsible was thoroughly deserved. The attention given to this case by the press has led to some useful criticisms as to the manner of providing adequate means of counteracting the evils of lead poisoning in such processes.

Medical Mayors.

The borough of Leamington has been fortunate in the election of Dr. T. W. Thursfield as mayor, and Tamworth equally so in the person of Mr. Sculthorpe. The views of life and its responsibilities will be justly held in higher estimation by the public as the privileges of citizenship and professional knowledge are combined for the good of the community in the administration of such important offices.

Increase of Small-pox.

Owing to the increase of small-pox in the city it was rumoured that the new hospital would have to be opened. The Health Committee think that at present this will not be necessary, though it is admitted that a slight increase in the number of cases would make it inevitable. At present there are 165 patients in the hospital suffering from this disease; but, as some are discharged daily and the admissions have diminished, there is reason to believe that the present accommodation will meet the requirements. During the epidemic of last year the committee were able to use the stoneyard of the workhouse for temporary buildings. The board of guardians are unable to grant this place at the present crisis, hence the inquiry as to the completion of part of the new buildings situated at Yardley.

some three miles from the town. In 1893 the city council voted £38,000 for the erection of a new small-pox hospital, the first instalment of a large scheme for the treatment of infectious cases. Part of the new buildings have been prepared with every convenience and facility for dealing with any increase in the number of cases should it become necessary.

Dr. Ed. Malins, Obstetric Physician to the General Hospital, has been appointed Professor of Midwifery at Mason College.

Nov. 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Royal Newcastle Infirmary.

AT the late meeting of the governors of our infirmary the chairman, in the course of his remarks, said that he was glad to announce that they had received from the Durham colliers an increased subscription of £120, as against £76 in 1893. He called this "a comparatively new item," because the Durham miners until recently sent all their collections to the Sunderland Infirmary.

The New Cholera Hospital in the Tees.

At the annual meeting of the Tees port sanitary authority, held at Middlesbrough on Nov. 12th, Mr. Lawes, engineer, intimated that the floating cholera hospital in the Tees was now practically completed, and he congratulated the authority on having the finest floating hospital in the kingdom.

The Outbreak of Measles at Gateshead.

Mr. Abraham, L.R.C.S.Irel., said at a late guardians' meeting, with respect to the outbreak of measles, that there were hundreds of cases in Gateshead at the present time, and that there had been several deaths. It was, he thought, distinctly unfair towards the medical men of the town, who were quite prepared to notify these cases, that they were not allowed to do so, measles not being included in the list of diseases to be notified, an omission which he considered to be absurd.

Carlisle Microscopical Society.

Mr. C. S. Hall, M.R.C.S., President of the Carlisle Microscopical Society, delivered an address to the members on the Electric Light in Use with the Microscope, which was much appreciated. Mr. Hall has long been a leader in microscopical work in the border city.

Lunacy in the County of Durham.

On a report to the county council a resolution has been passed "That it is desirable to take immediate steps to erect another asylum in a northern part of the county." The grounds for such an extension were the expense of bringing patients and the cost incurred by their relatives both in time and money, and the opinion of the medical superintendent that in the interests of the patients themselves it was not desirable to enlarge the present huge establishment. Before proceeding with the undertaking it would be necessary to make the requisite arrangements with Gateshead and South Shields. The patients on the books of the asylum had increased from 1271 on April 24th, 1893, to 1389, being an addition of 118. This sufficed to show the straits in which the authorities found themselves in trying to find accommodation for the insane poor. Besides this number in the asylum there were 118 boarded out, and thus the total number was 1507.

Infantile Mortality at Sunderland.

There were 63 deaths, representing a mortality rate of 24·1 per 1000 of the population per annum. No fewer than 41 of the deaths were of children under five years of age, being equal in themselves to a rate of 15·7. The death-rate in Sunderland subdistrict reached the extraordinary figure of 47 per 1000. Diseases of the respiratory organs caused 24 deaths, and this seems to be the principal factor in the high mortality.

Dr. Edward Jepson has been elected Mayor of Durham.

Newcastle-on-Tyne, Nov. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Retirement of Sir Arthur Mitchell.

IT is with a feeling of regret that it has to be announced that Sir Arthur Mitchell is to retire from the post of Commissioner in Lunacy, which he has held and adorned for so many years. He has occupied such a prominent place in Scotland, both in his own department and as an archæologist, that his retirement from official life necessarily arouses regret. It is, however, satisfactory to know that his health and vigour will still allow him to take some part in public affairs. Dr. Fraser is looked upon as the proper person to fill the vacancy which will be thus created. Dr. Fraser has been Assistant Commissioner in Lunacy for seventeen or eighteen years, and has done excellent work in his department. He began life as an asylum superintendent, and showed himself to be a superintendent of the best type. His appointment would only be a fitting acknowledgment of the thoroughness of his work as an assistant commissioner, and his appointment would give confidence in his reports and suggestions that only an expert can ensure.

The Lord Provostship of Edinburgh.

The three years' term of office as Lord Provost of the city of Edinburgh has just been completed by the first medical man who ever held the post. Sir James Russell, M.B., F.R.C.P.Edin., has occupied the civic chair with much acceptance, and has not spared himself in helping forward all medical and philanthropic objects in addition to the duties more commonly falling to the Lord Provost to perform. So acceptably had his duties been performed that there was a strong feeling in some quarters that he ought to be re-elected for another term of years, and yielding to the advice of some of his friends he was put forward for re-election. This proved to be unfortunate, for he was defeated by one vote, there evidently being a strong feeling in the council that the honour of being chief magistrate of the city ought to go round. He carries the good wishes of his professional brethren into his comparative retirement.

Professor Greenfield.

Professor Greenfield's friends will be pleased to know that he is so far recovered as to be able to resume his University work.

Small pox in Edinburgh and Leith.

During last week twenty-seven fresh cases of small-pox were intimated in Edinburgh, and there were three deaths from this disease. One case has been reported in Leith after a freedom of many weeks.

Death of Mr. John Christison, W.S.

The death is announced of Mr. John Christison, W.S., at the comparatively early age of sixty-two. He was a son of the late Sir Robert Christison, the eminent physician, and was well known in University circles, as he held the office of secretary to the University Court until quite recently. In conjunction with his brother, Sir Alexander Christison, M.D., he wrote the life of his father.

The Joint Board of Examiners of the Scottish Universities.

This board have issued statistics of passes and failures in the Preliminary Examination in Arts and Sciences and in Medicine, September to October, 1894. In compiling these, candidates who entered for a subject but did not present themselves at the examination or hand in a paper have been treated as if they had entered for that subject. We quote only the figures referring to the medical preliminary at the four Scottish Universities, particularly as they throw some light on the recent complaints as to the undue and unfair "stiffness" of the papers set to candidates; they certainly show that the "weeding out" process has been carried out with some thoroughness.

I.—UNIVERSITY OF ST. ANDREWS.—MEDICINE.

—	Entered.	Failed.	Passed.
Candidates taking four subjects	6	2	4
Candidates taking one subject	2	2	—
Total	8	4	4

II.—UNIVERSITY OF GLASGOW.—MEDICINE.

	Entered.	Failed.	Passed.	Passed in one subject.	Passed in two subjects.
Candidates taking four subjects ...	75	50	25	—	—
Candidates taking three subjects	6	2	2	1	1
Candidates taking two subjects ...	3	2	1	—	—
Candidates taking one subject ...	5	2	3	—	—
Total	89	56	31	1	1

III.—UNIVERSITY OF ABERDEEN.—MEDICINE.

	Entered.	Failed.	Passed.
Candidates taking four subjects	31	22	9
Candidate taking two subjects	1	—	1
Total	32	22	10

IV.—UNIVERSITY OF EDINBURGH.—MEDICINE.

	Entered.	Failed.	Passed.	Passed in two subjects.
Candidates taking four subjects	98	57	41	—
Candidates taking three subjects...	3	1	1	1
Candidates taking two subjects	3	2	1	—
Candidates taking one subject	17	8	9	—
Total	121	68	52	1

It may be mentioned that the figures regarding arts and science are very similar; in St. Andrews 108 out of 217 were absolutely rejected; in Glasgow, 230 out of 554; in Aberdeen, 114 out of 264; and in Edinburgh, 254 out of 565.

Hospital Sunday.

This has not turned out so well in Glasgow as was expected, the total from churches and Sunday schools amounting only to £3210, an increase of only £1100 over last year, when no such special effort was made.

Autumn Graduation Ceremony.

The graduation ceremony of Thursday last (Nov. 8th) was marked by the capping of two more lady medical graduates—Dr. Margaret Dewar and Dr. Elizabeth Lyness,—who received a most enthusiastic ovation from the male students present.

Practical Physiology in the University of Glasgow.

With the aid of a munificent grant from the Bellahouston trustees, who have funds for the promotion chiefly of the higher education in science in Glasgow, a room in the physiological department has now been fitted up for advanced teaching largely upon the model of that in the physiological laboratory of the University of Oxford. The apparatus includes a water-motor, which drives a horizontal steel spindle capable of being connected with a number of recording cylinders. There are ten complete sets of electrical and recording apparatus, so arranged that two students working together at each set can study experimentally the physiology of muscular contraction, nervous action, and the mechanism of the heart and of the circulation. Special sets of apparatus for the physiology of the senses and of the voice will also be provided. The class of advanced practical physiology is specially designed for students preparing to graduate in science, whether taking the pass or the honours degree of B.Sc. There seems every probability of the new Ordinances as regards science increasing the number of candidates in the Scottish Universities for the degree of B.Sc., the standard of which is comparable with that of the honours school in physiology in Oxford and to Part II. of the natural science examinations in Cambridge. This installation may be said to complete the equipment of the University of Glasgow both as regards physiological teaching and the prosecution of research. The advanced class, which will meet during the winter session only, is conducted by Dr. D. Fraser Harris, B.Sc. Lond., the second assistant, under the superintendence of Professor McKendrick.

Nov. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Small pox in Dublin.

THIS disease is increasing in the south side of the city and in a large drapery establishment, with 150 persons employed, sixteen of the assistants were attacked with small-pox upon the same day, and it is stated that additional cases have occurred, not only in the shop referred to, but in other establishments. Sir Charles Cameron has furnished a detailed report on the matter in which it is stated that the form of the disease is mild. The same day there were seventy-nine cases in Cork-street Hospital, and the previous week there had been thirty-nine fresh cases admitted to the same hospital.

Dublin Hospital Saturday.

The board of directors of the City of Dublin Hospital, in conjunction with the ladies' committee, propose to initiate a Saturday collection in aid of the funds of the hospital. Hospital Saturday is a recognised institution in Cork and Belfast. In the former the subscriptions are divided among the various hospitals; but the City of Dublin Hospital authorities appear to desire to monopolise the proceeds for their hospital alone, not allocating any portion to other institutions. It is to be hoped they will reconsider the matter.

Cork Eye, Ear, and Throat Hospital.

The bazaar and fancy fair which was recently held in Cork under the name of "Donnybrook Fair" has proved a decided success. I am informed that from the fête held a sum of close on £3500 has been obtained. In consequence of the energy, ability, and interest shown in the undertaking by Lady Arnott, it has been proposed by a member of the corporation of Cork that a full-sized portrait of Lady Arnott should be placed in the board room of the institution.

Catholic University Medical School Medical and Scientific Society.

At a general meeting of the above society, held last week at the Medical School, Professor A. Roche was elected president and Dr. E. McWeeney vice-president. The inaugural meeting will be held on Monday, the 19th inst., when the president will deliver an address.

Proposed Hospital Sunday in Cork District.

The Diocesan Synod of Cork, Cloyne, and Ross, Church of Ireland, have passed a resolution requesting the Bishop to set apart one Sunday in the year to be designated "Hospital Sunday" and to have special collections made for hospitals within the united diocese, the said collections to be distributed in such a manner as the Diocesan Council may approve.

Health of Dublin: September Quarter.

The births registered in the Dublin registration district during the quarter ending Sept. 29th last numbered 2473 and the deaths 1816, or 20·8. The deaths for last quarter were 3·0 under the average for the September quarter. Zymotic diseases caused 224 deaths, being 158, or 41 per cent., below the average for the third quarter of the past ten years; and this decline may be attributed to the almost complete immunity from fatal cases of measles and the comparatively low number of deaths from diarrhœa. During the quarter 17 fatal cases of small-pox were registered; 12 of these were unvaccinated. Typhoid fever caused 35 deaths, which is about the average number, and typhus fever 3 deaths, which is below the average. Influenza caused 4 deaths, hydrophobia 1, and diphtheria none.

Mr. John Bellew Kelly, J.P., of Drogheda, has been elected to the Aldermanship of Laurence-gate Ward.

Mr. R. L. Swan will be a candidate for the Vice-Presidency of the Royal College of Surgeons in 1896.

In consequence of over-crowding in the Richmond Asylum new structures are to be erected adjoining the present buildings.

Nov. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Serum Therapeutics.

THE Municipal Council of Paris has voted a subvention of 15,000 francs to the Pasteur Institute in aid of the preparation and distribution of antitoxin. A sum of 7601 francs is further voted for the installation of a shed in the abattoirs of Grenelle for the accommodation of immune horses. Finally, an allowance of 1500 francs is made to enable the institute to prepare and distribute anti-diphtheritic serum during the present month and the month of December. In the course of visits recently made to the institute I learned that eighty horses are now being immunised. An attempt to procure a supply of serum for a case of diphtheria in Birmingham was a failure, it being stated that the quantity available was barely sufficient for the needs of Paris alone. I was told, however, that after the 15th proximo applications for supplies could be satisfactorily attended to. At the time I made my unsuccessful application three Paris practitioners met with the same refusal.

Progressive Myopia and its Treatment.

In an instructive paper published by Dr. Kuhn (chef de clinique of Dr. Dehenne of Paris) in the *Médecine Moderne* of Nov. 10th that authority tells us that he recognises two forms of myopia—stationary myopia, due to lengthening of the axis of the eye, and progressive myopia, which is accompanied by lesions of the membranes, and which is a kind of glaucoma. The first variety is amenable to the use of lenses properly chosen; the second requires special treatment. The most common concomitant symptoms and lesions of progressive myopia are the perception by the sufferer of broken lines, posterior sclero-choroiditis, atrophy of the choroid, floating bodies, softening and detachment of the vitreous, detachment of the retina, and atrophy of the zonule of Zinn, involving subsequent dislocation of the lens. Dr. Dehenne explains these troubles by supposing that there is hyper-secretion of the intra-ocular fluids, with increase of globe tension and consequent lengthening of the axis. The sclerotic is distended, and the choroid, being less distensible than it, is torn here and there. This leads to posterior staphyloma, migration of pigment granules, and the development of chorio-retinitis, with deposit of patches of exudation. It is these patches which produce at the macula the sensation of broken lines, just as the muscæ volitantes complained of by the patients are caused by the presence of the escaped particles of pigment in the vitreous. The retina ends by becoming detached from the choroid, and the other lesions spoken of above follow. The prognosis used to be most unfavourable, blindness too often being the consequence; indeed, the condition above described was always considered incurable. Iridectomy and drainage had been tried and found wanting in the majority of cases. Since 1882 Dr. Dehenne has had recourse to sclerotomy with invariable success. It is stated that every patient was able to use the eyes without fatigue after the operation. Ophthalmoscopic examination of patients operated on years ago has shown that the lesions had become arrested. Dr. Dehenne practises sclerotomy directly floating bodies appear, and immediate operation is indicated when the sensation of broken lines is complained of together with ocular fatigue, or, *a fortiori*, when posterior staphyloma and choroidian atrophy are made out. The operation is safe and painless; in two days the patient can resume his ordinary occupation.

Professor Brown-Séquard's Successor.

At a meeting of the professorial board of the Collège de France held on Sunday last the candidates below mentioned for the chair of Medicine were voted for in the following order: (1) Dr. d'Arsonval, member of the Academies of Sciences and Medicine; (2) Dr. Charrin, Professeur-agrégé of the Faculty of Medicine. Dr. d'Arsonval will be known to your readers as the collaborator for many years of the late Dr. Brown-Séquard. He it was who devised a method for the preparation of aseptic orchitic juice, about which, by the way, we at present hear little said. Dr. Charrin occupies an honourable place in the ranks of the ardent bacteriologists of the Paris school. His name is frequently found associated in connexion with researches with that of another diligent pupil of Professor Bouchard—viz., Dr. Roger.

Nov. 13th

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Official Statement as to the Cause of the late Czar's Death.

ANY doubt that remained as to the cause of the death of the late Emperor has now been set at rest by the publication of two documents. The first is the diagnosis of the five physicians who attended the Czar in his fatal illness. It runs as follows: "Chronic interstitial nephritis with consequent affection of the heart and vessels, hæmorrhagic infarct in the left lung with resulting inflammation." This diagnosis was fully confirmed by the result of the post-mortem examination, which was made two days after death. The full details of the condition found are published in an official document or "Act." This is too long to quote in full, nor would it serve much purpose to do so, as the post-mortem picture presents nothing unexpected or unusual—it is a typical picture of a fatal case of Bright's disease; but to those who followed throughout the clinical features of the late Emperor's illness it may be of interest to know the exact state of the principal organs that was found after death. The kidneys were both greatly enlarged, the right measuring 16 cm. in length, 7 cm. in breadth, and 4 cm. in thickness; the left 15 cm. by 6·5 cm. by 4 cm. The capsule was not thickened or adherent; the outer surface of the kidney was finely granular, dark red in colour; the cortical substance was diminished (from 6 to 7 mm.) and yellowish, the medullary of a dark-red colour. The condition is described as one of "nephritis interstitialis cum atrophia substantiva corticalis renum granulosa." In the left kidney there was also a small cyst 3 mm. in diameter. The right lung was œdematous, and so was the upper lobe of the left lung; the lower lobe of the left lung was deeply congested and contained little air; at the upper edge of the lower lobe was found a typical triangular hæmorrhagic infarct, 1½ by 1 cm. in dimensions. It is of interest to note that in the apex of the right lung was found a fibrous cicatrix, indicating some old inflammatory mischief in that region. The heart was much enlarged, measuring 17 by 18 cm.; there was a considerable amount of subserous fatty deposit (lipomatosis cordis). The wall of the left ventricle was considerably hypertrophied (2½ cm. in thickness), and its muscular tissue was pale, flabby, and of a yellowish colour (degeneratio adiposa myocardii). The wall of the right ventricle was thinned (6 mm.) and of the same yellowish colour. The valvular apparatus was quite normal. The post-mortem examination was conducted by the Professor of Pathological Anatomy in the University of Moscow, Dr. Klein; Professor Zernof, who holds the chair of Normal Anatomy in the same University; Professor Popoff, Professor of Normal Anatomy in Kharkof University; and Drs. Altukhof and Biéloüsof, prosectors. These gentlemen, in summing up the results of the necropsy, declare that death was due to "paralysis of the heart, following degeneration of the muscular tissues of a hypertrophied heart and interstitial nephritis (granular atrophy of the kidney)."

The Serum Treatment of Diphtheria in Russia.

In all the important centres in Russia steps are being taken to obtain a supply of the anti-diphtheritic serum recently introduced by Dr. Roux. There are few countries where the need of such a remedy is so felt, or where its value can be more fully put to the test. The Alexander Barrack Hospital for Infectious Diseases in St. Petersburg has already four horses, and is constructing a stable to accommodate more, for the purpose of producing the material in sufficient quantities. Both the sanitary and the hospital commissions have requested the city authorities to advance a sum of money to enable experiments to be performed on a large scale, and in the meantime to obtain the prepared material from Paris. The well-known daily paper, the *Novoe Vremya*, has opened a public subscription with a similar object, the money in this instance to be handed over to the Imperial (Uldenburg) Institute of Experimental Medicine, where the preparation of the serum has already begun. Similar reports come from Moscow, Kharkof, Kief, Kazan, and elsewhere. Up to the present no results of the application of the treatment in Russia have been published.

Professor Metchnikoff.

Professor Metchnikoff recently repeated in Kief, before the Kief Society of Physicians, his lecture upon the Cholera Bacillus delivered at the Congress of Hygiene at Budapest.

The Cholera Epidemic.

There have been no cases of cholera in St. Petersburg for the past three weeks. In the provinces the epidemic is declining as the winter comes on, though in the last bulletin, published yesterday, the names of as many as twenty-six governments appear as returning a varying number of cases and deaths. In Podolia in the week ending Oct. 15th (27th) there were as many as 265 cases of cholera, with 149 deaths. The weather is cold throughout Russia, and in St. Petersburg and Cronstadt the navigation is on the eve of closing.

St. Petersburg, Oct. 29th (Nov. 10th).

Obituary.

CHRISTOPHER JOHNSON, F.R.C.S. ENG., L.S.A. LOND., J.P.

MR. CHRISTOPHER JOHNSON, who died on Nov. 6th in his seventy-ninth year, was a member of a family of medical men who had practised in the town of Lancaster for upwards of 100 years. His grandfather settled there during the last century. His father, also called Christopher, after studying in the University of Edinburgh, was a leading practitioner in Lancaster for more than fifty years, and was a man of exceptional culture, both literary and scientific. His eldest brother, James Johnson, a graduate of the University of Dublin, practised for some years as a physician in the town. The subject of our sketch, after studying his profession in Dublin and at Guy's Hospital and obtaining the diplomas of the Royal College of Surgeons of England and the Apothecaries' Society, settled in Lancaster at first as an assistant to, and then as junior partner with, his father. Both he and his brother James had inherited strong scientific tastes, and they soon gathered around them a group of young men whom they encouraged and assisted in the study of chemistry. One of these, Professor Edward Frankland, F.R.S., as everyone knows, has since attained the highest distinction as a scientific chemist. Subsequently, in the Mechanics' Institute, a room was set apart for studying practical chemistry; and the writer of this notice, who five and forty years ago had the privilege of being apprenticed to Christopher Johnson, recalls with pleasure and gratefulness the evenings spent there, with Mr. Johnson directing the work of himself and his companions. His interest in scientific pursuits did not make Mr. Johnson a less careful and conscientious practitioner of medicine. He thoroughly enjoyed the confidence of his patients and took an active part in medical work in his native town. For many years he was surgeon to the infirmary, and was a member of its committee of management. He was certifying surgeon under the Factory Act for the Lancaster district. He was elected a Fellow of the Royal College of Surgeons of England in 1854. He took a great interest in the local branch of the British Medical Association; in 1879 he was President of the Lancashire and Cheshire Branch, and when it for a second time visited Lancaster in 1886 he read to the members an interesting paper on Sanitary Reform One Hundred Years Ago. He also threw himself with energy and tact into the public life of the town. For a number of years he was a member of the corporation and in 1857-58 was mayor. He was made a borough magistrate in the same year, and in 1882 was placed on the Commision of the Peace for the county. He was a most useful member of the central committee of the Royal Albert Asylum for Idiots, and acted on the boards of many public charities. He was always ready to assist in furthering the educational agencies in the town, and he not infrequently read to the various societies papers on scientific subjects of interest. Mr. Johnson was a man of sterling piety. In both his personal and professional character he was an example of the strictest integrity and honour. He was trusted alike by his patients and the public, and the many duties imposed on him were discharged in a way to justify the confidence of his fellow-townsmen; but the more serious side of his character was lightened by a keen perception of humour. He had a great fund of stories and anecdotes ranging over the persons and incidents of his long life, many of which he told in the Doric of his native county, and when narrating them his face beamed with mirth and showed a keen appreciation of the point of the story. His townsmen evinced their sense of his worth, and their recognition of his character, services, and professional position, by according him a public funeral.

WALTER DICKSON, M.D. EDIN., R.N.,

LATE MEDICAL INSPECTOR TO HER MAJESTY'S CUSTOMS.

DR. WALTER DICKSON came of a family with a distinctly scientific turn of mind. His father before settling in practice in Edinburgh had been a surgeon in the East India Company's Service, and was a man of considerable general education and refined tastes in art and music, besides enjoying a well-founded reputation for professional attainment. Educated at the High School of Edinburgh, Walter Dickson proceeded to the University and went through the courses in arts and science under, among others, Professors Pillans, Dunbar, and Jameson. He then entered the medical school, and had for his teachers Professors Christison, Traill, Hope, Home, Sir G. Ballingall, Sir Charles Bell, Syme, Alison, Morro Thomson, and Simpson. He was apprenticed to his father for five years—1835-40—at the age of fifteen years, this time being concurrent with his school and University classes. He graduated in 1841 with first-class honours, his thesis on the Pathology of Dropsy being the third in order of merit. He entered the Royal Navy immediately after graduation, and was appointed to the flagship at Portsmouth for duty at Haslar Hospital. This was his only home appointment. Then followed twenty years' almost continuous foreign and active service, often in flagships, including the Antartic Expedition of 1844-45, three years on the Congo and the West Coast of Africa suppressing the slave trade, the Russian war in the Baltic, the Indian Mutiny, and China war, some of the details of which are to be found in the autobiographical sketch that he gave as his address when President of the Metropolitan Counties Branch of the British Medical Association in 1885.[1] At the end of twenty years of service in the navy he was appointed Medical Inspector to Her Majesty's Customs, an office which he held for nearly thirty years. On the occasion of his retirement from this office, in which he was happily succeeded by his son, Dr. T. Hugh Dickson, there was a significant outburst of expressions of respect, which is only forthcoming when a servant with a high record retires. The health of men under his charge during epidemics was a record attesting the soundness of his medical judgment.

His tastes were literary and artistic, with a bent towards systematisation and statistics. He had the true historical mind, marshalling his facts with ease and being able to draw on a wonderful memory both for generalisations and detail, and had acquired the habit of viewing a question in an impartial and judicial spirit. He kept most accurate and interesting journals—one of professional work, the other of social and daily life. These memorials constitute good reading for those who have known some of the friends he made between forty and fifty years ago. In particular the period Dr. Dickson spent on the Lisbon and Oporto Station in 1846-48 in the flagship and on the Mediterranean station in 1848-49 is most delightfully described, with accounts of the many interesting classical places he visited at leisure during a year's stay at Naples when Bomba was king. With the art treasures of Rome and other parts of Italy he had an appreciative acquaintance, and as he was extremely fond of music the opera had considerable attractions for him. He picked up a good deal of Portuguese and acquired a fair knowledge of Italian during these years, and in both of these languages his good Latin was of great assistance. He was a great reader, and wrote various professional papers. He was a sociable man nevertheless, and few men will be more missed than he in the gatherings of the profession, and not least in that of the Edinburgh University Club, of which he was a most honoured member. Such a life is a study and an example and an honour to his profession. Dr. Dickson's merits met with many recognitions. For his services in the Baltic he received the Baltic medal. He was specially mentioned for services at the attack on the Peiho Forts on June 25th, 1859. He received the Blane Gold Medal for the medical history of H.M.S. *Chesapeake*, and a medal from the French Government for his sound words on Naval Hygiene.

The published writings and addresses of Dr. Walter Dickson are worthy of enumeration. They are as follows: (1) On Antarctic Meteorology, Royal Society's Transactions (1846);

[1] Brit. Med. Jour., July 4th, 1885.

(2) Narrative of the Antarctic Voyage of H.M.S. *Pagoda*, *United Service Magazine* (1850); (3) on Syphilis in the Navy (1854); (4) on Epidemic Cholera for Medical Officer of Privy Council (1866); (5) on Scurvy in the Mercantile Navy (1866); (6) on Sanitation Afloat (1867); (7) Annual Reports on the Health of Customs Officers (twenty years, 1862-1882); (8) on the Numerical Ratio of Disease (1875); (9) on the Geographical Distribution of Disease (1885); (10) on Recent Epidemics at Home and Abroad (1886); (11) Notes on Cholera and Tropical Fevers and many minor papers on medical and scientific subjects (1887); (12) on Influenza in the Customs Force, 1890, and Total Exemption from Mortality during the whole of that year from that and other diseases (1891); Report on Influenza for Local Government Board (1891). He served on the Committee on Cholera and Quarantine, 1865, and he gave evidence to the Admiralty Committee on Esthetic Diseases, on Arctic Expedition, Scurvy, and other hygienic subjects.

For some years Dr. Dickson had been in imperfect health with a degree of glycosuria; but only lately did he have any serious symptoms of diabetes, but friends noted with regret that he was aging. His death was due to a carbuncle involving the whole of the back of the neck. He was in his seventy-fourth year. His family in their grief will have the sympathy of the Services of which he was so useful and distinguished a member, and of the profession of which he was an ornament. We record with satisfaction that he was a frequent and valued contributor to the columns of THE LANCET.

WALDEMAR JOSEPH ROECKEL, M.B., B.S. LOND., F.R.C.S. ENG.

To many of our readers the announcement of Mr. Roeckel's death will come as a painful surprise, and the sadness of it will be heightened by the fact, as narrated in another column by our Australian correspondent, that it was due to a misadventure with cocaine. His medical education was received at St. Bartholomew's Hospital and extended by visits to the great Continental schools. After a successful student career he qualified as M.R.C.S. Eng. in 1873, L.R.C.P. Lond. in 1874, and F.R.C.S. Eng. in 1876. In 1882 he took the London University M.B. and B.S. degrees. He held appointments on the teaching staff of St. Bartholomew's Hospital, and was at one time Surgeon to the National Orthopædic Hospital. For the last fifteen years he was a constant visitor to the medical societies, and was well known as a rising practitioner. About three years ago, however, he quitted England for Australia, and joined Dr. Herman Lawrence in practice at Fitzroy, Melbourne, where his life prematurely came to an end last September at the age of forty-three years. He belonged to a musical family, and, in addition to other accomplishments, was an excellent pianist.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of Fellow in Anatomy and Physiology at a meeting of the Board of Examiners on Monday, the 12th inst.:—

Robert King Howat, M.R.C.S. Eng., of Glasgow University; William James Woods, of Queen's College, Belfast; Herbert Springfellow Pendlebury and Ivor Lloyd Tuckett, of Cambridge University; John Edward Williams, M.R.C.S. Eng., of St. Bartholomew's Hospital; and Harry Driffield Levick, M.R.C.S. Eng., of Anderson's College, Glasgow, and St. Thomas's Hospital.

Ten gentlemen were referred back to their professional studies for six months.

Tuesday, the 13th inst.:—

Herbert Tanner, M.R.C.S. Eng., and William Charrington Wood, M.R.C.S. Eng., of St. Mary's Hospital; William Barnabus Woodhouse and Charles Roberts, of Middlesex Hospital; Frank Ernest Ingall, M.R.C.S. Eng., of London Hospital; John Gordon, M.R.C.S. Eng., of Melbourne University and King's College Hospital; George Rowell, M.R.C.S. Eng., of Durham University and St. Bartholomew's Hospital; Edward Ferrand, M.R.C.S. Eng., Surgeon-Major Indian Medical Service, of St. Bartholomew's Hospital; Mark Farrant, M.R.C.S. Eng., of Westminster Hospital; and Arthur William Ormond, of Guy's Hospital. Six gentlemen were referred for six months.

Wednesday, the 14th inst.:—

George Trustran Watson, of Cambridge University and St. George's Hospital; David Brown, M.R.C.S. Eng., and Cecil Huntington Leaf, M.R.C.S. Eng., of London Hospital; John Howell, of Guy's Hospital; and William Denison Wiggins, of St. Mary's Hospital. Eleven candidates were referred for six months.

The following are the arrangements for the Final Examination for the Fellowship, for which thirty-five candidates have entered their names:—Monday, 19th inst., Written Examination, at Examination Hall, 1.30 to 5.30 P.M.; Tuesday, 20th inst., Clinical Examination, at Examination Hall, 2.30 to about 5.30 P.M.; Wednesday, 21st inst., Operations Examination, at Examination Hall, 1.30 to about 5.30 P.M.; Thursday, 22nd, Surgical Anatomy, at Examination Hall, 2 to 3.45 P.M.; Friday, 23rd, Pathology, at Royal College of Surgeons, 5 to about 9.30 P.M. Candidates will be required to attend on all the above-mentioned dates.

ROYAL COLLEGES OF PHYSICIANS AND OF SURGEONS IN IRELAND: CONJOINT SCHEME.—The following candidates have passed the Supplemental Preliminary Examination:—

Honours.—L. G. de Rosario.
Pass List.—G. Canillo, J. Coffey, J. Harvey, A. H. Jacob, J. Lavery, M. H. Lynch, H. G. Morrison, G. R. McClintock, E. A. Nelson, E. Roberts, J. P. Lynnott, T. R. Thornton, R. O. White, and W. Whitsitt.

At the autumn examinations just concluded the following candidates obtained 70 per cent. or upwards of the total marks, and were classed as having "passed with honours." The names are given in order of merit:—

Preliminary Examination (September).—J. N. B. Martin, J. F. Shone, H. S. Maxwell, J. Burke, P. Coffey, C. H. Bryan, and D. A. Fitzgerald.
Preliminary (October).—L. G. de Rosario.
First Professional.—J. A. Browne.
Second Professional.—W. E. Jolliffe.
Third Professional.—H. T. Conyngham.
Final.—T. P. Conlon, G. S. Davidge, J. Dwyer, and E. F. Power.

DR. DAWSON TURNER has been awarded a Keith prize of £10 from the Royal Scottish Society of Arts for a paper on Electrical Resistance. Dr. Orphoot has also been awarded a Keith prize, value £3, for a paper on a Method of Hermetically Closing Bottles or Jars.

BEQUESTS AND DONATIONS TO HOSPITALS.—Miss Jane Holgate, late of South-parade, Burnley, has bequeathed £200 to the Northern Counties Hospital for Chronic and Incurable Diseases, and £250 to the Victoria Hospital for Burnley and District.—The late Mr. George Paton, of Queen's-gardens, London, has bequeathed £150 to the St. Mary's Hospital, Paddington.—Miss Mary A. Beck, late of Poole-park, Fulham, has bequeathed £250 to the University College Hospital, Gower-street, London.—Mr. F. D. Johnson, late of Aykley-heads, Durham, has bequeathed £500 to the Durham County Hospital.—The Mercers' Livery Company has voted fifty guineas to the Royal Hospital for Diseases of the Chest, City-road.—The Merchant Taylors' Livery Company has forwarded a donation of £21 to the West London Hospital at Hammersmith-road.—Mr. James Stables, of Horsforth, has sent a donation of £105 to the Leeds Public Dispensary.—The treasurer of the Leeds Infirmary has received £1000, bequeathed by the late Mr. John Scott, of Hunslet-road, Leeds, and also a further sum of £1000 from the trustees of the late Miss Hannah Pickard, being a second instalment on account of her bequest.—Dr. H. Danson, late of St. John's Wood, has bequeathed £500 to the Royal Free Hospital, London, and £550 to the University College Hospital, London.—Lord Ducie has sent a cheque for £500 to the Gloucestershire Infirmary and Eye Institution, stipulating that the capital be kept intact until his decease.—The late Miss Ann Wells, of Leasingham, near Sleaford, has bequeathed the residue of her property, estimated at about £12,000, to the Leicester County Hospital.—The Committee of the National Sanatorium, Bournemouth, for Consumption and Diseases of the Chest, has received a donation of £52 10s. from the Fishmongers' Livery Company.—The late Miss Elizabeth Reay, Birmingham, has bequeathed legacies to the following Birmingham charities:—£2500 to the Jaffray Hospital, £200 to the Children's Hospital, £100 to the Women's Hospital, Sparkhill, and £50 each to the Eye Hospital and the Orthopædic Hospital.—Messrs. Barclay, Perkins, and Co., London, have sent a donation of 100 guineas to the Royal Surrey County Hospital at Guildford.—The Corporation of London has granted 100 guineas to the Victoria Hospital for Sick Children, Chelsea, and Broadstairs; 50 guineas to the City Orthopædic Hospital; and 100 guineas to the British Home for Incurables.—The late Mrs. C. W. Puckle of Montpelier-crescent, Brighton, has bequeathed £200 to the Sussex County Hospital, Brighton.

ROYAL MEDICAL SOCIETY, EDINBURGH.—The following office-bearers have been elected for the session 1894–95:—Presidents: Drs. John Orr, J. Purves Stewart, C. C. Easterbrook, and Jas. G. Cattanach. Secretaries: Messrs. W. Macrae Taylor and Kenneth MacLean. Chairman of Finance Committee: Dr. John Henderson. Curator of Library: Mr. H. J. F. Simson. Curator of Museum: Mr. Angus Macdonald. Chairman of Public Business Committee: Dr. Fred. W. Mackay. Editor of Transactions: Dr. W. A. J. Alexander. Treasurer: Mr. J. R. Young. Sub-librarian: Mr. A. P. Ormiston.

DERBYSHIRE ROYAL INFIRMARY.—The eighty-fifth anniversary of the Derbyshire Royal Infirmary was celebrated last week. According to custom, the members of the corporation and the governors of the infirmary went in procession from the town hall to All Saints' Church, where the Dean of Hereford preached, the Bishop of Derby and many other clergymen being also present. At the annual meeting, afterwards held at the infirmary, it was stated that the completed portions of the new buildings were occupied, and that 120 beds were now available. A legacy of £1000 had been received under the will of the late Mr. Worthington, and £28,000 had been given last year in donations. On the proposition of Lord Scarsdale it was decided to erect a chapel at the infirmary in memory of the late Sir William Evans at a cost of £2000.

THE BRITISH ORTHOPÆDIC SOCIETY.—The first meeting of this society took place at the Holborn Restaurant on Saturday, Nov. 3rd. The chair was taken by Mr. Noble Smith (chairman of the Provisional Committee); a number of gentlemen interested in orthopædic practice were also present. The provincial hon. secretary, Mr. E. Luke Freer, read the notice convening the meeting, and gave the names of several gentlemen who were unable to attend, but had signified their willingness to join the society. After discussion of rules for the government of the society it was resolved, following the lines successfully adopted by several other societies, that the meetings should be of a semi-social character, the chairman to be elected by the members present at each meeting; that the meeting should be held alternately in London and the provinces; that the election of members should be by ballot, the subscription being fixed at half a guinea annually. The following officers were elected:—Hon. treasurer: Mr. C. R. B. Keetley. Hon. secretaries: Messrs. A. H. Tubby and E. Luke Freer. Council: Messrs. Walsham, Muirhead Little, D'Arcy Power, Noble Smith, R. Jones (Liverpool), N. Grattan (Cork), Reeve (Sunderland), and C. T. Holland (Liverpool). Application for membership may be made to the hon. secretaries, Messrs. A. H. Tubby, 39, Finsbury-circus, London, E.C., or E. Luke Freer, 43, New-hall-street, Birmingham.

LITERARY INTELLIGENCE.—A valuable addition to the standard medical literature of America is in preparation, and will be published by Mr. Treat, 5, Cooper Union, New York. This is a System of Legal Medicine, in two large royal octavo volumes of about 700 pages each, illustrated with photographs, chromo-lithographs, and line engravings. The editors are Dr. McLane Hamilton, consulting physician to the Insane Asylum of New York City, and Mr. Lawrence Godkin of the New York Bar. The authors of the various articles are all eminent in their several departments.—Messrs. J. Rothschild, 13, Rue des Saints-Pères, Paris, announce for immediate appearance "La Traité de la Thérapeutique des Tissus," by Dr. M. Bra. The book is a collection of all essays and communications by the late Professor Brown-Séquard upon the therapy of organic extracts, and will be fully illustrated.—We understand that Messrs. Churchill will publish at an early date an important work on the Prevention of Epidemics and the Construction and Management of Isolation Hospitals by Dr. McNeill, medical officer of health of the county of Argyll. The subjects of disinfection and isolation are of the highest importance to all practitioners, and will be treated by Dr. McNeill in ample detail. The establishment, construction, and management of infectious hospitals are dealt with in separate chapters. Dr. McNeill has for many years been known as a writer on infectious diseases, of which he has acquired large experience in various fever and small-pox hospitals in London. Numerous plans and designs of hospitals will accompany the work.—Messrs. Cassell and Company will shortly publish "The People's Life of William Ewart Gladstone," which, within the compass of a shilling volume, fully illustrated, will contain a popularly written account of the career of the great statesman.

MR. P. L. SCLATER, M.A., F.R.S., the secretary of the Royal Zoological Gardens, has been elected an Honorary Fellow of Corpus Christi College, Oxford.

A CLINICAL MEETING of the Neurological Society of London will be held at the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, on Thursday, Dec. 6th, at 8.30 P.M. Members desirous of showing cases are requested to communicate with Dr. Howard Tooth or Dr. F. W. Mott, the hon. secretaries, as soon as possible.

THE November dinner of the Aberdeen University Club in London will take place on the 21st inst. at 7 P.M. in the Holborn Restaurant. Professor Alexander Ogston will take the chair, and members desiring to join the Club, or intending to be present at the dinner, may communicate with the hon. secretaries, Mr. J. Gerard Laing, 1, Elm-court, Temple, E.C., and Dr. James Galloway, 21, Queen Anne-street, W.

FOOTBALL CASUALTIES.—During the progress of a match on Saturday last at Hertford, between the Hertford Caxtonians' second eleven and Hatfield Town Clubs, a Caxtonian forward fractured his clavicle and sustained other injuries, and was removed from the field.—On the same day, in a match at Blackburn between the Blackburn Rovers and Sunderland teams, a player received an injury to the abdomen, and was taken to the infirmary.

BOXGROVE CONVALESCENT HOME.—For the last thirty years a Convalescent Home has existed at Boxgrove, Berkshire, about two miles from Theale Station. Convalescents from St. Mary's Hospital have occupied it for the last two years, but as they are now transferred to Kent, Mrs. Wilder of Sulham House has decided on continuing the work of the home, with ten beds for the reception of cases neither infectious nor incurable. An annual subscription of one guinea entitles the donor to send a patient for a fortnight. It is reckoned that a yearly sum of £200 is required to carry on the home permanently.

CATHOLIC UNIVERSITY MEDICAL SCHOOL.—The following exhibitions and medals were awarded last week:—Chancellor's Gold Medal: William Dargan. First Year's Exhibition for R.U.I. Students, value £12 10s.: P. Canning, B.A. First Year's Exhibition for Conjoint Students, value £12 10s.: Wm. O'Connor. Second Year's Exhibition for R.U.I. Students, value £10: Charles Moore. Second Year's Exhibition for Conjoint Students, value £10: Gerald Kearney. Third Year's Exhibition for Conjoint Students, value £12 10s.: Robert Joyce. Medal in Junior Anatomy: Bernard Healy. Medal in Senior Anatomy: Robert Farnan. Medal in Osteology: Charles Moore. Medal in Junior Physiology: Gerald Kearney. Medals in Senior Physiology: Joseph Crean and Robert Farnan, equal. Medal in Histology: J. J. Kinsella. Medal in Chemistry: J. A. Byrne. Medal in Practical Chemistry: D. O'Sullivan. Medal in Medicine: Robert Joyce. Medal in Surgery: James C. M'Walter. Medals in Operative Surgery: Wm. Dargan and John Davys (equal). Medal in Midwifery: Thomas Conlon. Medal in Pathology: William Dargan. Medals in Materia Medica: William M'Cann and V. Maher (equal). Medals in Medical Jurisprudence: P. O'G. Lalor and J. C. M'Walter (equal). Medal in Elementary Biology: William O'Connor. Medal in Elementary Physics: William O'Connor.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The autumn dinner of the association took place on Nov. 10th at the Café Monico; the President, Dr. R. Heath of St. Leonards, was in the chair. The association's guests were the President of the Royal College of Surgeons of England (Mr. Hulke), and Sir John Williams, Bart. Replying to the toast of the guests, Mr. Hulke paid an elequent tribute to the Irish schools of medicine. He spoke in warm praise of the work of Graves, Stokes, and Corrigan, of Wilde, Colles, and Robert Macdonell. He said that it gave him great pleasure to meet the Irish graduates, who were the heritors of glorious traditions. He referred to the disabilities in respect of candidature for hospital appointments of which Irish diplomates justly complained, and speaking for the great College which he represented he could promise the warmest sympathy and support in the effort the association was making to have these restrictions removed. Sir John Williams, in proposing the toast of the association, desired to add his mead of praise to the admirable achievements of the Irish obstetricians. He thought that the rule in force at many hospitals requiring candidates for honorary appointments to belong to an English

college was unjust and inexpedient. It had reference to a state of things prior to the Medical Act of 1858, and was no longer defensible. He trusted to see it a thing of the past.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

AGNEW, T. H., M.R.C.S., L.R.C.P. Ed., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

ARMSTRONG, HUBERT, M.B., Ch.B. Vict., has been appointed House Physician to the Royal Infirmary, Liverpool.

BARBER, G. T. CONGREVE, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Resident Medical Officer to the Birmingham Workhouse, vice G. A. Ferraby, resigned.

BARNES, E., M.B. Aberd., has been appointed Junior House Surgeon to Ancoats Hospital, Manchester, vice J. L. B. Dixon, M.B., B.Ch., resigned.

BLAYNEY, A., M.B., B.Ch., B.A.O. Irel., has been appointed Physician to the Mater Misericordiæ Hospital, Dublin.

BOND, W. A., M.D., M.R.C.P., D.P.H. Lond., has been appointed Medical Officer of Health for St. Olave's Sanitary District, Southwark, vice Wightwick.

BOYD, ROBERT, M.B., C.M. Glasg., has been appointed Junior House Surgeon to Huddersfield Infirmary.

BUCK, T. A., M.B. Lond., M.R.C.S., has been appointed Medical Officer on the senior medical staff of the Royal Isle of Wight Infirmary and County Hospital.

COHEN, ABRAHAM, M.A., M.D., B.Ch. Dub., has been appointed Physician in charge of Jewish out-patients to the Metropolitan Hospital of London.

COLES, C., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the fifth sanitary district of the Leicester Union.

COULSON, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary of the St. George's Union.

DARGAN, W., M.B., B.Ch., B.A.O. Irel., has been appointed Surgeon to the Mater Misericordiæ Hospital, Dublin.

EASTERBROOK, CHARLES CROOMHALL, M.A., M.B., C.M., has been appointed Third Assistant Physician to the Royal Asylum, Morningside, Edinburgh.

EMERY, W. d'E., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed Obstetric and Ophthalmic House Surgeon to the Queen's Hospital, Birmingham.

GAMGEE, LEONARD PARKER, F.R.C.S. Eng., has been appointed Surgeon to the Children's Hospital, Birmingham.

GUNN, DONALD, F.R.C.S., has been appointed Assistant Surgeon to the Royal Westminster Ophthalmic Hospital.

JACOB, E. L., M.R.C.S., has been reappointed Medical Officer for Epsom and Chertsey.

JONES, L. G. D., M.R.C.S., L.R.C.P. Lond., has been appointed District Medical Officer at Birmingham.

LAMPORT, H. C., M.B., C.M., has been appointed Certifying Surgeon for Factories and Workshops for the Lancaster Division.

LIVSEY, W. E., M.B., Ch.B. Vict., M.R.C.S., L.R.C.P., L.S.A., has been appointed Ophthalmological Assistant to the Lock Hospital and to the Royal Infirmary, Liverpool.

MACLEHOSE, NORMAN M., M.B., C.M. Glasg., has been appointed Assistant Surgeon to the Central London Ophthalmic Hospital.

MALINS, EDWARD, M.D., Obstetric Physician to the General Hospital, has been appointed Professor of Midwifery at Mason College, Birmingham.

MOORE, E. J., L.R.C.S. & P.I., has been appointed House Physician to St. Vincent's Hospital, Dublin.

MCCLELLAND, W., M.B., Ch.B. Vict., has been appointed Gynæcological Assistant to the Royal Infirmary, Liverpool.

NIXON, J. P., M.B., Ch.B. Vict., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

O'CONNELL, J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer at the Workhouse for the Township of Toxteth Park.

O'DWYER, J., L.R.C.P., L.R.C.S., L.M. Irel., has been appointed Surgeon to the Mater Misericordiæ Hospital, Dublin.

O'GORMAN, CHAS., L.R.C.P., L.R.C.S. Irel., L.M., has been appointed Surgeon to the Mater Misericordiæ Hospital, Dublin.

O'SULLIVAN, P. T., M.B., B.Ch., B.A.O. Irel., has been appointed extern Surgeon to the South Charitable Infirmary and County Hospital, Cork.

ROBINSON, WILLIAM, M.D., M.S., F.R.C.S. Eng., has been appointed Honorary Physician to the Sunderland Infirmary, vice Professor Brady, M.D., F.R.S.

ROSS, S. J., M.B., Ch.B. Vict., has been appointed House Physician to the Royal Infirmary, Liverpool.

SHAW, A. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Raynham Sanitary District of the Walsingham Union.

SIMPSON, F. H., M.B., B.S. Durh., M.R.C.S., L.R.C.P., has been appointed House Physician at the Queen's Hospital, Birmingham.

SINGAR, H., M.R.C.S., L.R.C.P., has been appointed House Surgeon at the Queen's Hospital, Birmingham.

SMITH, M. J., M.B. Univ. Dub., has been appointed House Surgeon to St. Vincent's Hospital, Dublin.

TODGOOD, F. S., M.D. Lond., D.P.H. Lond., has been appointed Medical Superintendent of the New Infirmary and Principal Medical Officer of the Workhouse at Lewisham, S.E.

VEALE, F. J. DE C., M.B., Ch.B. Vict., has been appointed House Surgeon to the Royal Infirmary, Liverpool.

WATSON, H., M.D., C.M. Aberd., has been reappointed Medical Officer for the fifth sanitary district of the Norwich Union.

WADD, H. RANDALL, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Great Northern Central Hospital.

WILSON, H. R., M.R.C.S., L.R.C.P., has been appointed House Physician to the Royal Infirmary, Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, with an allowance for cab hire and furnished rooms, fire, lights, and attendance.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—House Surgeon, unmarried. Salary £30 per annum, with board, lodging and washing.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for two years. Salary to commence at £30 per annum, with residence and maintenance in the house.

DOVER HOSPITAL.—House Surgeon, unmarried. Salary £100 a year, with board and lodging.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Junior House Surgeon. Board, lodging, and laundry provided in the Hospital.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

HOSPITAL OF ST. PETER PORT, Guernsey.—Two qualified Surgeons, non-resident, for the hospital and out-door poor for one year. Salary £50 each per annum currency (vaccination included) in addition to which a certain allowance will be made for the vaccination of persons not chargeable to the parish.

KENSINGTON DISPENSARY.—Honary Medical Officer.—Applications to the Honorary Secretary, 7, Stanford-road, Kensington-square.

KING'S COLLEGE, London.—Sambrooke Medical Registrarship.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—House Surgeon. Salary £120 per annum, increasing by £10 a year at the discretion of the committee, with furnished apartments, board, and washing.

PADDINGTON INFIRMARY.—Resident Clinical Assistant for six months. Board and residence provided and an honorarium of twelve guineas, subject to the completion of six months' satisfactory service. Application to the Clerk to the Guardians, 239, Harrow-road, W.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—Clinical Assistants for six months.

THE HOSPITAL FOR WOMEN, Soho-square, London.—Registrar for twelve months. Honorarium 25 guineas.

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, London, S.E.—Registrar and Anæsthetist, for one year. Honorarium on expiration of term £30.

WARNEFORD HOSPITAL, Leamington Spa.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging and washing.

WESTERN DISPENSARY, Rochester-row, Westminster, S.W.—Four Attending Medical Officers.

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried. Salary £120 per annum, with board, furnished apartments, coal, gas and attendance in the hospital.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Anæsthetist (honorary and non-resident).

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On Nov. 9th, at Tring, the wife of James Brown, M.B., of a son.

CANT.—On Nov. 7th, at 3, Lindum-road, Lincoln, the wife of W. J. Cant, M.R.C.S., L.R.C.P., of a daughter.

COATES.—On Nov. 5th, at Streatham, S.W., the wife of M. Coates, Esq., M.D., F.R.C.S., R.N., of a son.

COLLIE.—On Nov. 11th, at 63, Burton-crescent, W.C., the wife of John W. Collie, M.B., C.M., of a son.

PENNELL.—On Oct. 5th, the wife of G. Herbert Pennell, M.D. Oxon, F.R.C.S. Lond., 434 Calle, 25 de Mayo, Buenos Aires, of a daughter.

MARRIAGES.

ALLINGHAM—HAYLES.—On Oct. 27th, at Christ Church, Lancaster-gate, William Allingham, F.R.C.S. Eng., to Daisy Alice Wynne Hayles.

GAIRDNER—BOND.—On Nov. 10th, at St. Margaret's Church, Ipswich, M. W. Gairdner, M.B., L.R.C.S. Edin., of Rione Amedeo, Naples, to Mary Emblyn Bond, only daughter of the late Henry C. Bond, Esq., of Westwood, Ipswich.

PENDLETON—DONOVAN FOSTER.—On Oct. 30th, at St. Nicholas Church, Brighton, Richard Warren Pendleton, M.D., second surviving son of the late Capt. Henry L. Pendleton, of Trim, county Meath, Ireland, to Eliza (Lizzie) Donovan Foster.

DEATHS.

DICKSON.—On Nov. 9th, at 32, Belvedere-road, Upper Norwood, Walter Dickson, M.D., R.N., late Medical Inspector H.M. Customs, in his 74th year.

JOHNSON.—On Nov. 8th, at Burgh, Lincolnshire, Joseph Johnson M.R.C.S. and L.S.A., in his 53rd year.

MARLOW.—On Nov. 7th, at Alverstoke, Hants, Inspector-General Benjamin William Marlow, M.D., C.B., aged 74.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (20, Hanover-sq., W.).—7.30 P.M. Introductory Address by the President (Mr. S. R. Lovett) on "The Past, Present, and Future of the Society." To be followed by a Discussion.

TUESDAY.—ROYAL STATISTICAL SOCIETY (28, Jermyn-st.).—4.45 P.M. The President (Lord Farrer): The Relations between Morals, Economics and Statistics. (Inaugural Address.)

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Stephen Paget: (1) Malignant Disease of the Larynx; (2) Acute Septic Epiphysitis. Mr. C. A. Morton: Malignant Disease in Glands of Groin with Secondary Growths in the Skin.—Mr. Anthony Bowlby: Epitheliomatous Cyst of Neck.—Mr. F. T. Wallace: Epitheliomatous Cyst of Neck.—Mr. J. F. Targett: Encysted Tumour of the Bladder.—Mr. G. Shattock: Wolffian Adenoma of Kidney.—Dr. W. P. Herringham: Subdural Hæmorrhage in Pernicious Anæmia.—Dr. Voelcker: Syphilitic Ulceration of Large Intestine; Recto-vesical Fistula.

WEDNESDAY.—ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Mr. H. B. Guppy: Methods of Determining the Influence of Springs on the Temperature of a River, as illustrated by the Thames and its Tributaries.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. E. M. Nelson: On a Simple Method of Measuring the Refractive Indices of Media.—Dr. W. A. Turner: Demonstration on Staining Central Nervous System (with Lantern).

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Golding Bird: A case of Pulsatile Congenital Cyst simulating Aneurysm.—Dr. Herringham and Mr. Bruce Clarke: A case of Idiopathic Dilatation of the Sigmoid Flexure.—Dr. F. Taylor: A case of Leucocythæmia treated with Arsenic and Inhalation of Oxygen.—Mr. Arbuthnot Lane: A case of Supernumerary Testis.—Dr. E. W. Goodall: An unusual case of Tracheal Diphtheria.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Corneal Affections. London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Woakes: Tinnitus and Vertigo.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank and Dr. Hewlett: Erysipelas and Suppuration.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: General Paralysis.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. J. E. Pollock: Certain Helps towards Prognosis in Consumption.—Royal London Ophthalmic Hospital, Moorfields, 3 P.M., Mr. A. S. Morton: Optic Neuritis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—1 to 5 P.M. Dr. Morgan Dockrell: Sycosis.

WEST LONDON HOSPITAL (Hammersmith-road, W.).—5 P.M. Dr. Dunn: Purulent Ophthalmia and other Eye Cases. (Post-graduate Lecture.)

SOCIETY OF ARTS.—8 P.M. Opening Address of Session by Maj.-Gen. Sir John Donnelly.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Medical Registrar: Pathological Demonstrations of Medical Specimens.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Gowers: Clinical Cases.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Patrick Manson: Filarial Disease.

LONDON SKIN HOSPITAL.—3 P.M. Mr. Augustus Harbord: Diseases of the Hair Follicles.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. Percy Kidd: Cases of Special Interest.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 A.M. Dr. J. O. W. Barratt: Pathology of the Skin.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Hyslop: Puerperal and Lactational Insanity.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—2 to 6 P.M. Dr. Morgan Dockrell: Pemphigus.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 15th, 1894.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo.	Maximum Temp Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 9	29·71	S.W.	46	44	62	55	44	...	Overcast
,, 10	29·56	S.W.	53	52	85	58	45	0·06	Cloudy
,, 11	29·37	W.	45	43	79	52	43	0·10	Cloudy
,, 12	29·17	S.W.	49	48	61	55	45	0·45	Overcast
,, 13	29·65	N.W.	45	43	71	52	44	0·63	Cloudy
,, 14	29·19	S.W.	52	50	53	53	44	0·10	Raining
,, 15	29·25	N.	46	44	49	46	45	0·67	Raining

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

THE RISKS OF THE MEDICAL PRACTITIONER.

A STORY of the way in which the medical man is frequently victimised has lately been reported from Sheffield. An ingratiating visitor took up his quarters at a well-known hotel and inspired confidence by his demeanour and aspect. Having been seized with severe illness he was for a long time attended by two medical men, and a trained nurse was procured for him. The care and treatment bestowed were successful in restoring him to health; but he rewarded his benefactors by abruptly quitting the town without repaying any of the outlay incurred in his behalf. This exemplifies one of the difficult positions in which a practitioner may from time to time be placed. He cannot conscientiously disregard a summons to attend a stranger whose life may be at stake—the question of his remuneration must even be secondary; but our medical brethren will act wisely in not allowing their benevolence to outrun their prudence in the case of migratory patients.

AMBULANCE CLASSES.

To the Editors of THE LANCET.

SIRS,—I should be glad if any of your readers could tell me where diagrams suitable for ambulance classes (showing more fully than those lent by the St. John Association), male and female first aid, can be hired; also slides for magic lantern of bone and tissues of body &c., to be exhibited at the same classes. I am, Sirs, yours faithfully,

Nov. 9th, 1894. M.D.

"KING v. THE METROPOLITAN RAILWAY COMPANY."

WITH reference to an annotation entitled "King v. the Metropolitan Railway Company," which appeared in our issue of Nov. 10th, we are asked by Mrs. Maitland King to state that she took her degree in the United States, where she is also on the Register, and that her five months' residence in the States must not be taken to infer that she had only five months' study.

THE following, which we take from the *West Cumberland Times* of Saturday, Nov. 3rd, is worthy the consideration of the profession. Are we in London in danger of losing the services of a valuable addition to the ranks of specialism? If so we can bear it with equanimity.

> "*Bone-setting.*—Mr. John Hunt, hairdresser &c., has for some time past been making a special study of the human frame, especially with regard to dislocations and fractures of the various limbs and joints. He has just completed a course of lessons in London and undergone an examination in the healing art, and in the course of a few weeks expects to be in a position to undertake cases of bone-setting &c."

Nautilus.—We can assure our correspondent that myopia requiring correcting glasses of 3·5 D would constitute an absolute bar to the admission of the candidate into the Royal Navy.

Etiquette.—Our correspondent's letter will receive attention.

"EPIDERMIN."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 27th Mr. Brookes of Lewisham asks the question, What is epidermin? In THE LANCET of Nov. 10th he says that he has been informed that it is an unguent base prepared by Messrs. Warner and Co. Perhaps Mr. Brookes, and your readers, too, would like to know something more about it. In the "Year-Book of Treatment" for 1893 Mr. Malcolm Morris gives an interesting account of this remedy. He reports that Kohn (*Intern. Klin. Rundsch.*, Nov. 15th, 1892) strongly recommends epidermin as a new base for ointments. It is a mixture of glycerine, water, and beeswax rubbed together to form a liniment. It is a milky, semi-fluid mixture. It dries in the air, and if painted on the skin forms a firm elastic layer. Substances with difficulty soluble or quite insoluble in water—e.g., chrysarobin, sulphur, &c.—can be accurately mixed with epidermin without undergoing any change in composition. Kohn found a 10 per cent. chrysarobin-epidermin useful in psoriasis and a zinc oxide-epidermin in dry eczema. Some twenty months back, on reading this favourable report, I asked a chemist to make me some epidermin. After various trials he failed utterly to make a suitable mixture of wax, glycerine, and water. He then wrote to several of the leading chemists in London and asked for a specimen of epidermin, but nobody knew anything about it. Finally, after further correspondence abroad, a German chemist sent a supply of epidermin mixed with chrysarobin. This was a roughish granular and non-adhesive compound. I tried it on a psoriatic patient, but it would not adhere to the skin; in fact, it so quickly crumbled off that I saw it was perfectly useless as a varnish. I gave it no further trial, and threw the stuff away. Yet, judging from the laudatory account of the remedy in the "Year-Book of Treatment," there surely must be an epidermin different from the one sent to me; and if so it is perhaps a proprietary compound, and it probably contains something in addition to the wax, glycerine, and water. I am, Sirs, yours faithfully,

Eastbourne, Nov. 10th, 1894. J. TALFOURD JONES.

To the Editors of THE LANCET.

SIRS,—With reference to your correspondent's letter on the above subject in your current issue, we should be glad if you could favour us with further information. As agents for Messrs. W. R. Warner and Co. (if this be the firm referred to), we have not yet heard of the unguent base bearing the above name.—We are, Sirs, yours faithfully,

London, Nov. 13th, 1894. F. NEWBERY AND SONS.

P.S.—We have endeavoured to find Mr. C. A. Brookes' address with the view of writing to him privately, but have so far failed to do so.

THE OBLIGATION NOT TO PRACTISE IN BONDS.

Mr. D. W. Cooper.—There is nothing which the law more sacredly protects than the force of contracts between man and man. We are not aware of any difference as between medical man and medical man. Even if there were any legal difference the moral force of such contracts should be even more binding than between other men.

"THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON."

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait's letter in THE LANCET of Nov. 10th may seem to call for some reply; but as the Women's Free Hospital was discussed at a very numerously attended meeting of the Southampton Medical Society on the 6th inst.—one of its two acting medical officers, Mr. Lawson Tait, being present,—and as the Society has taken the matter in hand, it is for the present necessary to withhold all criticism upon that letter.—I am, Sirs, yours faithfully,

J. E. THOMAS,
Librarian and Member of Committee of the
Nov. 14th, 1894. Southampton Medical Society.

BARROW v. RYAN.

IN the High Court of Justice, Queen's Bench Division, before Mr. Justice Wright and a common jury, on Oct. 26th, 1894, the above case was disposed of. The plaintiff is a surgeon practising at 50, Clifton-street, Finsbury, E.C., and the defendant is also a surgeon practising at 42, St. John's-road, Hoxton, N. The action was brought to recover damages from the defendant for breaches of a covenant contained in an agreement dated March 22nd, 1893, and made between the plaintiff of the one part and the defendant of the other part. The covenant was to the effect that the defendant would not practise within half a mile of the plaintiff's surgery for a period of two years. The breaches were admitted; but defendant pleaded that the plaintiff was only entitled to recover from him the amount received from the patients he had attended, which, however, were only small sums. The plaintiff purchased the practice in Clifton-street in March, 1893, for £400, the gross profits averaging £10 per week. The defendant afterwards commenced to practise in St. John's-road, when the receipts from plaintiff's practice fell to £5 a week. The jury found a verdict for the plaintiff, and awarded him £125 damages, for which judgment was given with costs.

MEDICAL ATTENDANCE ON THE MIDDLE CLASSES AT CHEAP RATES AT WANDSWORTH.

A CARD is sent us, thousands of which are said to be put under hall doors all over the locality, according to which advice and medicine are offered at 1s. The object is said to be to provide the middle and working classes with medical advice and attendance at nominal charges. The address given is 21, Hazlebury-road, Wandsworth-bridge-road, S.W. The name is wisely withheld.

AN APPARATUS FOR THE DEAF.

To the Editors of THE LANCET.

SIRS,—An apparatus was mentioned to me yesterday which had been seen some years ago in the case of a deaf lady whose hearing it rendered comparatively acute. It was held on the lap and apparently had no communication with either ear or throat, being simply directed towards the speaker. These details are meagre, but are all I have been able to glean, the lady who was seen using it being now dead. If you can give me any idea of what was the instrument referred to, where it may be obtained, and whether experience justifies its use I should be much obliged. I have already applied to a local surgical appliance manufacturer without avail. I am, Sirs, yours faithfully,

Nov. 6th, 1894. AURICLE.

SURGICAL OPERATIONS AND NEWSPAPER PARAGRAPHS AT BLACKPOOL.

WE have to express our sympathy with an unfortunate lady at Blackpool whose tumour in the breast and its removal are made the subject of a paragraph in the local paper in connexion with the names of three medical men and two nurses. We cannot believe that either the nurses or the medical men have given their sanction to such an ill-placed piece of news. But we appeal to newspaper reporters to respect the privacy of sickness and to regard such facts as unseemly material for newspapers.

THE POLYNESIAN HERBAL REMEDY COMPANY.

WE have received from this Company, who address us from Suva, samples of certain vegetable remedies, and information of the discovery of "large quantities of the constituent herbs," enabling them to reduce their quoted prices to us. We shall be happy to learn if any of our readers have been favoured with specimens of these ecbolics—"Labor-Aid" is the pretty title—and to see the accompanying literature.

ERRATUM.—In our last issue, in the Manchester letter, p. 1122, line 44 from the top of the second column, an error escaped detection. "Oct 30th" should have been *Nov. 6th.*

During the week marked copies of the following newspapers have been received:—*Derbyshire Times, Bath Chronicle, Bradford Observer, Cork Examiner, Folkestone Express, South Bucks Free Press, Birmingham Gazette, Liverpool Express, Nottingham Guardian, Newcastle Leader, Sheffield Telegraph, Cambridge Express, Manchester Guardian, Leicester Mercury, North Wales Chronicle, Advertiser, Harrogate, Whitehall Review, Scotsman, Times of India, New York Sun, Echo, Morning, To-Day, Lancaster Guardian, Hertfordshire Mercury, City Press, Pioneer Mail, Builder, Reading Mercury, West Middlesex Standard, Yorkshire Post, Architect, Bristol Mercury, Liverpool Daily Post, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Sanitary Record, Indian Textile Journal, Bombay, South-Western Star, Local Government Journal, Courrier de la Presse, Surrey Advertiser, West Middlesex Advertiser, Lloyd's Weekly Newspaper, Dunstable Borough Gazette, Chesham Examiner, Nottingham Evening Post, Million, Evesham Standard, Weekly Scotsman, Ayr Observer, Midland Evening News, Wilts Standard, European Mail, Cannock Chase Mercury, Journal of the American Medical Association (Chicago), Leeds Mercury, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. C. F. M. Althorp, Bradford; Mr. R. B. Anderson, Lond.; Anat. Soc. of Gt. Brit. & Irel., Hon. Sec. of; A. B., Lond.; Alpha, Lond.

B.—Dr. Bra, Paris; Dr. T. S. Brodie, Dereham; Mr. Lennox Browne, Lond.; Mr. J. F. Bullar, Southampton; Mr. L. A. Barrow, Lond.; Mr. G. T. C. Barber, Birmingham; Mr. H. L. Browne, Lond.; Mr. J. H. Briscoe, Lond.; Mr. W. H. Brown, Leeds; Mr. L. Burton, Burton-on-Trent; Mr. T. B. Browne, Lond.; Messrs. J. Bale & Sons, Lond.; Messrs. W. V. Bowater & Sons, Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Black & Co., London; Brit. Orthop. Assoc., Lond., Hon. Secs. of; Brit. Laryngol. & Rhinol. Assoc., Lond., Hon. Sec. of; Briton, Lond.; B.A., M.D., London.

C.—Dr. J. Cagney, Lond.; Dr. J. A. Coutts, Lond.; Mr. W. F. Clay, Edin.; Mr. F. E. Cane, Liverpool; Mr. H. E. Cobb, Lond.; Mr. Watson Cheyne, Lond.; Mr. E. T. Collins, Lond.; Mrs. Cadell, Edin.; Messrs. Crouch, Edwards, & Heron, Lond.; Messrs. Crossley, Moir & Co., Lond.; Messrs. T. Christy & Co., Lond.; Coll. of Phys. of Philadelphia, Sec. of; Clayton Hosp., Wakefield, Sec. of; Chester Gen. Infy., Sec. of.; Chemists' Erated Min. Waters Assoc., Lond, Sec. of; Church Sanit. Assoc., York, Hon. Sec. of; Condyle, Lond.; Caye.

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E.—Dr. L. Eger, Vienna; Mr. E. F. Eliot, Southampton; Mr. A. R. Edwards, Bampton Brian; Etiquette, Derbyshire; Ealing, Lond.

F.—Dr. R. W. Felkin, Edin.; Dr. T. R. Fraser, Edin.; Dr. Fleming, Combe Martin; Mr. R. Fenner, Cromer; Messrs. Farrer & Sons, Reading; Messrs. Falk, Stadelmann, & Co., London.

G.—Dr. L. G. Guthrie, Lond.; Dr. J. Galloway, Lond.; Mr. J. H. Goldwin, Rochester; Mr. S. A. E. Griffiths, Irthlingboro'.

H.—Sir F. Seymour Haden, Alresford; Mr. T. Garrett Horder, Cardiff; Mr. R. J. Hill, Worthing; Mr. T. D. Harries, Aberystwith; Mr. A. Heald, Lond; Mr. W. K. Hitch, Beaworthy; Mr. W. Horrocks, Bradford; Mr. J. Heywood, Manchester; Messrs. J. Halford & Son, Lond.; Harvard Co., Lond., Manager of; H. C., Lond.; H. W.

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L.—Mr. H. Littlewood, Leeds; Mr. M. E. Ling, Saxmundham; Mr. H. C. Linden, Tadley; Herren Loescher & Co., Rome; Messrs. Lee & Nightingale, Liverpool; Leeds & West Riding Med.-Chir. Soc., Sec. of; Lond. Soc. of Compositors, Gen. Sec. of; London Skin Hosp., Sec. of.

M.—Dr. G. Macdonald, Lond.; Dr. R. McNeill, Edin.; Mr. W. J. C. Miller, Lond.; Mr. J. A. Manton, Sheffield; Mr. A. J. McBride, Atlanta, U.S.A.; Mrs. M. Maitland-King, Lond.; Messrs. J. Maclehose & Sons, Glasg; *Morningside Mirror*, Edin., Editor of; Maltine Manufacg. Co., Lond.; Mutual Life Assur. Office, Lond., Actuary & Manager of; McMurray's Roy. Paper Mills, Wandsworth; Med.-Legal Soc., Washington, U.S.A., Sec. of; M.D. Lond., London.

N.—*Nord Medical*, Editor of; N.B., Watton; Nemo, Leicester.

O.—Dr. T. H. Openshaw, Lond.; Mr. S. Osborn, Lond.

P.—Dr. C. Planta, Nice; Mr. R. A. Prichard, Conway; Mr. Y. J. Pentland, Edin.; Mrs. J. E. Perkins, Boston, Mass.; Paddington Parish, Clerk to Guardians of.

Q.—Quinton Cycle Co., Coventry.

R.—Dr. J. B. Richardson, Torquay; Dr. A. J. Richardson, Brighton; Mr. G. F. Rougham, St. Helens; Mr. S. Radlauer, Berlin; Mr. D. B. Reid, Lond.; Mr. J. D. Riedel, Berlin; Messrs. A. Riddle & Co., Lond.; Messrs. Rose & Coutts, Glasg.; Messrs. Rivington, Percival, & Co., Lond; Roy. Brit. Nurses' Assoc., Lond., Sec. of; Roy. Statist. Soc., Lond.; R. M. F., Lond.

S.—Dr. F. F. Schacht, Lond.; Dr. D. J. Sherrard, Hailsham; Dr. G. Sharp, Leeds; Dr. S. H. Snell, Grays; Dr. R. Sisley, Lond.; Mr. G. K. Skinner, Lond.; Mr. A. M. Sheild, Lond.; Mr. W. D. Severn, Lond; Mr. E. Swain, Arlesey; Mr. M. Stephens, Emsworth; Mr. M. Shirley, Leeds; Mr. M. Smale, Lond; Mr. C. H. Sers, Lond.; Mr. E. Sturges, Wokingham; Messrs. S. Smith & Co., Lond.; Messrs. Slade, Lewis, and Slade, Lond.; Soc. for Suppression of Opium Trade, Hon. Sec. of; Sanit. Wood Wool Co., Lond.; Salus, Lond.; Sacrifice, Lond.; Sine Diploma, Lond.

T.—Sir W. Turner, Edin.; Dr. T. W. Thursfield, Leamington; Dr. G. Danford Thomas, Lond.; Dr. G. Tricomi, Roccalumera-Pagliari, Messina; Dr. J. Thompson, Ballyarnett, Londonderry; Dr. J. L. Thomas, Southampton; Dr. J. K. Thornton, Leeds; Dr. W. B. Tomson, Luton; Dr. E. S. Thompson, Lond.; Mr. Lawson Tait, Birmingham; Mr. W. M. Taylor, Edin.; Mr. G. Thompson, Dublin; *Therapist*, Editor of.

V.—Dr. Van Niessen, Wiesbaden; Mr. H. Verney, London; Vrava Co., San Francisco, Manager of; Victoria Hosp., Burnley, Hon. Sec. of.

W.—Dr. E. Walker, Liverpool; Dr. S. Wilks, London; Dr. Hugh Woods, London; Mr. S. Wittman, London; Mr. A. Wilson, Manchester; Mr. G. C. Woolley, Burton-on-Trent; Mr. H. A. Wickers, London; Messrs. White, Druce, and Brown, London; Messrs. Wright, Dain, and Co., Birmingham; Messrs. Williams, and Norgate, London; Woodhall Spa Sanatorium, Lincoln, Sec. of; Western Disp., Westminster, Sec. of; Warneford Hosp., Leamington Spa, Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—A.P., Lond.; Æsculapius, Lond.

B.—Dr. D. C. Black, Glasg.; Dr. W. S. H. Briand, Lond.; Dr. J. H. Boyden, Pembroke; Mr. H. R. H. Bigg, Lond.; Mr. H. Boullen, Manchester; Mr. W. H. Bell, Romsey; Mr. S. H. Benson, Lond.; Mr. T. Bell, Lancaster; Miss Braithwaite, Ramsgate; Messrs. Burgoyne, Burbidges & Co., Lond.; Messrs. A. & C. Black, Lond.; Messrs. Bryce & Rumpff, Lond.; Bridgwater Infy., Sec. of; Bath Roy. United Hosp., Sec. of; Birmingham, Lond.; Bonus, Lond.; Brading, Lond.; B.A., M.D., London; Brixton, Lond.; Bono, Lond.

C.—Dr. H. E. Crook, Margate; Mr. W. H. Clark, Newbridge; Mr. W. Y. Clemes, Toronto; Mr. D. Cooper, Huntingdon; Mr. T. Carous, Castlebar; Messrs. Cohen & Co., Lond.; Messrs. Coleman & Co., Norwich; Messrs. J. Cleave & Son, Crediton; Coppice, The, Nottingham, Clerk of; Condyle, Lond.; Carpus, Lond.; Cambridge, Lond.; C., Lond.; Confidential, Lond.; Chirurgus, Lond.

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E.—Mr. C. G. Ellis, Attleborough; Eustachius, Lond.

F.—Dr. J. Findlay, Penpont, N.B.; Dr. W. R. Fenton, Newbridge; Dr. H. J. Faussett, Tamworth; Miss Ferguson, Broughton Ferry; Rev. F. K., Lond.; F.F.P.D., Attleboro'; Fidelity, Lond.; Fides, Lond.

G.—Mr. J. H. Goldwin, Rochester; Mr. J. M. Gondie, Lerwick; Mr. J. Gibbs, Heckmondwike; Messrs. Gilyard Bros., Lond.; Gen. Life Assur. Co., Lond., Actuary of; Gen. Apoth. Co., Sec. of; G. G., Henfield.

H.—Dr. D. D. Harris, Carmarthen; Dr. M. M. Hagopian-Arabkir, Turkey; Dr. W. Hector, Manchester; Mr. T. Hickling, Sulgrave; Mr. W. H. Haley, Lond.; Mr. T. Holmes, Lond.; Messrs. Hewlett & Son, Lond.; Messrs. Haasenstein & Vogler, Geneva; Messrs. Hopkinson & Co., Nottingham; Hants County Asyl. Farnham, Clerk of; Hull Roy. Infy., Sec. of; H.P.D., Lond.; H. C., Lond.; House Surgeon, Lond.

J.—Dr. W. Jamison, Birkenhead; Mr. J. Jones, Bournemouth; Messrs. Johnson & Jörgensen Lond.; J. B., Bristol; J. H., Lond.

K.—Mr. J. G. Kay, Darwen; Mr. H. Kelvey, Sheffield; K., Lond.

L.—Dr. T. Laird, Heywood; Mr. G. P. Ladd, Canterbury; Mr. J. L. Lynch, Patricroft; Mr. W. K. Loveless, Stockbridge; Leeds Hosp. for Women and Children, Sec. of; L. G., Lond.

M.—Dr. C. W. C. M. Medlicott, High Oakham; Dr. A. F. Mackenzie, Ipswich; Dr. McKettrick, Lond.; Dr. C. A. Mercier, Catford; Dr. Moore, Wincanton; Mr. W. Martindale, Lond.; Mr. G. E. G. Metcalfe, Paddock Wood; Messrs. Maythorn & Son, Biggleswade; Macclesfield Gen. Infy., Sec. of; Manchester Children's Hosp. & Disp., Sec. of; Medicus, Bournemouth; M. H., Lond.; M. D., Bristol; Medicus, Lond.

N.—Dr. E. Norton, Folkestone; Brigade-Surg.-Lieut.-Col. Notter, Southampton; Mr. R. G. Nesbitt, St. Just; North Staffs Infy., Stoke-on-Trent, Sec. of; Newcastle Corporation, Treasurer of; Nurse, Lond.; Nelaton, Lond.

O.—Dr. O'Callaghan, Lond.

P.—Mr. H. A. Pearson, Inkberron; Mr. J. Paston, Standish; Messrs. Porteous & Co., Glasg.

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